EXHIBIT NO.

17

Docket Item #14-A TEXT AMENDMENT#2004-0008

Planning Commission Meeting November 4, 2004

CASE:

TEXT AMENDMENT #2004-0008

AMENDMENT TO NONCOMPLYING USE REGULATION APPLICABLE TO

COAL FIRED POWER PLANTS

ISSUE:

Consideration of a request for a text amendment to the Zoning Ordinance to revoke the noncomplying use status of coal fired power plans, which was granted in 1992, and to categorize such plants as nonconforming uses, subject to abatement.

PLANNING COMMISSION ACTION, NOVEMBER 4, 2004: On a motion by Mr. Robinson, and seconded by Ms. Fossum, the Planning Commission voted to recommend approval of the text amendment. The motion carried on a vote of 7 to 0.

Reason: The Planning Commission agreed with staff's analysis and recommendation.

Speakers:

Poul Hertel, spoke in support of the text amendment and expressed concerns over health issues in the adjacent residential neighborhoods caused by operations at the nearby Mirant Potomac River Generating Station.

Bud Hart, representing the Mirant Potomac River Generating Station, spoke against the text amendment.

Lee Davis, VP of Mirant MidAtlantic and resident of the City, spoke against the text amendment stating that Mirant is important to the region and the company has taken important steps to improve the plant's operations.

David Kramer, Air Management Services for Mirant, spoke against the text amendment and reported on steps taken by the power plant to improve NOx emissions in the past five years.

Hula Edmonds, Director of Operations for Mirant, spoke against the text amendment stating that NOx emissions from the plant have decreased and described the impact the text amendment would have on existing employees of the power plant.

Roger Waud, President of the North Old Town Independent Citizen Assoc. and VP of the Board of Marina Towers Condominium Association, spoke in support of the text amendment stating that the Marina Towers building has sustained damage due to "downwash" from the Mirant Power Plant. He also stated that many residents of the building have developed health problems due to emissions from the plant.

Lillian White, Co-president of the League of Women Voters of Alexandria, spoke in support of the text amendment stating that the League's research shows that the power plant is the number one stationary source of air pollution in the area.

Elizabeth Chimento, 1200 N. Pitt Street, spoke in support of the text amendment stating that for eight years there has been a consistent level of grayish-ash residue on her house and cars. Ms. Chimento shared with the Commission findings of scientific studies conducted by herself and Poul Hertel and cited the significant health impacts that emissions from the power plant have had on the community.

Katy Cannady, representing the Rosemount Citizens Association, spoke in support of the text amendment and considers the power plant to be a health hazard.

Bill Gausman, Vice President with PEPCO, spoke against the text amendment stating that a change in zoning would jeopardize the ability to deliver safe and reliable electric power to the District of Columbia.

Ernest Lehmann, spoke in support of the text amendment stating that the power plant has had numerous violations and caused health problems to the citizens in the area.

Michael Hobbs, representing the Old Town Civic Association, spoke in support of the text amendment and expressed concern over the serious health risks due to the emission of particulate matter from the power plant.

Dicket Hern#N-A

City of Alexandria, Virginia

MEMORANDUM

TO:

THE CHAIRMAN AND MEMBERS

OF THE PLANNING COMMISSION

FROM:

IGNACIO PESSOA CITY ATTORNEY

DATE:

SEPTEMBER 29, 2004

SUBJECT:

TEXT AMENDMENT # 2004-0008

AMENDMENT TO NONCOMPLYING USE REGULATIONS

APPLICABLE TO COAL FIRED POWER PLANTS

ISSUE: Consideration of a text amendment to the Zoning Ordinance to revoke the noncomplying use status of coal fired electrical power generating plants, and to categorize such plants as nonconforming uses, subject to abatement.

RECOMMENDATION: That the Planning Commission adopt the following amendment to add new Section 12-216 (NONCONFORMING ELECTRICAL POWER GENERATING PLANTS) under Section 12-200 (NONCONFORMING USES) of Article XII (NONCOMPLIANCE AND NONCONFORMITY) of the City of Alexandria Zoning Ordinance:

[The following is all new language.]

Section 12-216 Nonconforming electrical power generating plants.

- Notwithstanding any contrary provision of this ordinance, any electrical power (A) generating plant in existence on (date of final adoption), which produces power through the combustion of coal, and is located in a zone in which such use is neither a permitted or special use permit use, or in a zone in which such use is a special use permit use but for which a special use permit for the entire use has not been granted, shall be deemed a nonconforming use, and shall be subject to abatement as provided in Section 12-214(A) of this ordinance.
- Any nonconforming use subject to this Section 12-216 shall comply with the (B) following rules regarding repairs, improvements and alterations to the building and the use, unless a special use permit has been granted pursuant to Section 12-214(A), which provides otherwise:
 - No alteration to a building which directly prolongs the life of the (1) nonconforming use shall be permitted.

- (2) Fixtures used in connection with the generation of power, such as turbines, generators, boilers, smokestacks, fuel or ash receiving or handling facilities, control systems and pollution control equipment, may not be installed, replaced or upgraded, although ordinary repairs and maintenance to such fixtures as existed on (date of final adoption) is permitted; provided, however, that the installation, replacement or upgrade of pollution control equipment may be permitted if approval therefor is obtained by special use permit issued pursuant to the Section 11-500 of this ordinance.
- (3) Ordinary repairs and maintenance to building components, such as HVAC equipment, electrical service, siding, shingles and roofing, are permitted.

DISCUSSION: Under the 1992 Zoning Ordinance, electrical power generating plants are permitted in the UT/Utilities and Transportation Zone, if approved by special use permit. Power plants which predate the SUP requirement were classified as noncomplying uses.¹

Noncomplying use status is a benefit or privilege conferred by the City in 1992, and, *inter alia*, allows a use such as a power plant, which now requires, but has never obtained, special use permit approval, to continue in existence indefinitely, and to be repaired, modernized and reconstructed.

Since 1992, several types of uses have had this favored status revoked because the City has determined that the prolonged operation of such uses would have an adverse impact on the community.

Revocation of noncomplying use status results in the use becoming a nonconforming use, and thus Section 12-214 of the Zoning Ordinance requires that operation of the use terminate within seven years, unless (1) a special use permit allowing continued operation of the use is approved, or (2) a special use permit extending the seven year abatement period to such longer period as an individual operator demonstrates would be reasonable given the operator's legitimate investment in the affected business is approved. Alternatively, where the zone in which the existing use is located permits the use by special use permit, the operator has the additional avenue of seeking to obtain such a permit and thus to remove altogether the burden of nonconforming status. Absent

As the term is used in the Alexandria Zoning Ordinance, only one "electrical power generating plant" presently exists in the City, the Mirant Potomac River Generating Station at 1400 North Royal Street, and this plant is currently a noncomplying use. The Arlington-Alexandria Waste to Energy Plant is classified in the Zoning Ordinance as a "waste to energy plant," and this use is permitted in the I/Industrial Zone by special use permit. The existing waste to energy plant at 5301 Eisenhower Avenue, however, is located in the OCM(100) Zone, as is thus also classified as a noncomplying use. Nothing in the proposed text amendment affects the "waste to energy plant" use in any fashion.

one of these special use permits, financial investment to prolong the life of the nonconforming use is severely restricted.²

On June 22, 2004, City Council adopted as City policy that "coal-fired, power-generation operations are not compatible with the Council's long-term vision for Alexandria, from both an environmental and land use perspective, and, accordingly . . . that all [such] operations cease and all [such] facilities be removed from Alexandria." As part of its implementation of this policy, Council adopted Resolution No. 2111, and formally initiated the process of revoking the noncomplying use status of coal fired power plants which have not obtained a special use permit for the lawful operation of the use. See docket materials, Attachment 1.

Since 1992, substantial evidence of harmful effects from the continued operation of older, coal fired power plants has become available. Such older plants have been shown to emit into the air and water high volumes (up to 10 times dirtier as compared to newer plants with more advanced control technology or different fuel sources) of oxides of nitrogen (NOx) and sulphur dioxide (SO2 or SOx), small (PM2.5) and large (PM10) particulate matter as well as compounds of barium, chromium, copper, lead, manganese, mercury, nickel, selenium, vanadium and zinc. The harmful impact on the surrounding area from older plants with shorter stacks (as opposed to newer plants with taller stacks) is magnified because short stacks offer less opportunity for dilution and dispersion of the contaminants, resulting in higher concentrations in the environs of the plant. These pollutants contribute to summer ozone problems, cause acid rain, increase the incidence of pulmonary, cardiovascular and other diseases, and rain nuisance dusts and toxic metals on the plant's environs and the entire region.

As discussed above, nonconforming use status carries with it restrictions on financial investment which will prolong the life of the use. Because such restrictions might prevent the installation of new or enhanced pollution control equipment on a nonconforming power plant, and thus prevent interim improvements to air and water quality during the abatement period, the Council requested that this text amendment include, as it does, a provision allowing improvements in pollution control equipment, subject to special use permit approval.

I conclude that the imposition of nonconforming use status in these circumstances, coupled with the provisions of the text amendment which allow a nonconforming power station to remove the onus of nonconforming status by obtaining a special use permit under the UT Zone to operate indefinitely subject to conditions, or in the alternative to continue operation as a nonconforming use but subject to special use permit conditions, and to implement improved pollution control

² A copy of Section 12-214 of the Zoning Ordinance is Attachment 2.

technology, will afford the City the necessary flexibility to address from a zoning perspective and in an orderly fashion the land use impacts and harmful environmental effects from the continued operation of older, coal fired power plants. Accordingly, I recommend that the Planning Commission adopt the proposed text amendment.³

Attachment 1 Docket materials, June 22, 2004
Attachment 2 Zoning Ordinance Section 12-214
Attachment 3 Memorandum, September 28, 2004

As described in the memorandum from the City Manager and T&ES Director to Council dated September 28, 2004, Attachment 3, the Mirant Potomac River Generating Station is the subject of a proposed consent decree and regulatory order by consent which address some, but not all, of the health and environmental issues related to this vintage plant. In particular, the consent decree, which is subject *inter alia* to approval by the Texas court handling Mirant's bankruptcy case, would permit Mirant to install "technology more effective than SOFA [Separated Over-Fire Air] at reducing NOx emissions" at the plant. Such technology would involve the shipment, storage and use of ammonia at levels which would pose additional and different environmental risks to Alexandria. In addition, any investment in new technology at the plant may prolong the life of this use, contrary to the position adopted by Council that the plant should be closed. The proposed text amendment gives the City a formal, regulatory role in determining the future, and the future land use and environmental impacts, of this facility, and nothing in the consent decree excuses Mirant from complying with otherwise valid local zoning regulations. Thus, the proposed consent decree should not be seen as obviating the need for this text amendment.

EXHIBIT NO. ____

6-22-04

City of Alexandria, Virginia

MEMORANDUM

DATE:

JUNE 17, 2004

TO:

THE HONORABLE MAYOR AND MEMBERS OF CITY COUNCIL

FROM:

PHILIP SUNDERLAND, CITY MANAGEROS

SUBJECT:

ISSUES RELATED TO THE MIRANT POTOMAC RIVER GENERATING

STATION

Attached is a copy of the docket memorandum on this subject that Council considered at its May 12, 2004, legislative meeting (Attachment 1). Also attached are various letters on the subject that have recently been sent to Council (Attachment 2).

Rather than delivering another docket memorandum on this subject, I have asked staff to prepare a presentation for the June 22 legislative meeting that will, in a clear and comprehensive fashion, address -- and, thereby, enable the Council to have a meaningful discussion on -- the following:

- (1) the numerous questions and issues that have arisen regarding the Mirant Potomac River plant;
- (2) the options available to the City to bring about the closure of the Potomac River plant, along with the pros and cons, and realistic availability, of each option; and
- (3) the options available to the City, apart from plant closure, to improve the quality of the emissions (including coal dust and other fugitive emissions) from the Potomac River plant, along with the pros and cons, and realistic availability, of each option.

I would recommend that, following the staff presentation and its own discussion, Council turn to the recommendations set out in the attached docket memorandum (Attachment 1), determine the manner in which it wishes to amend them, and then proceed to adopt the recommendations, as amended.

Attachments:

- 1. Docket memorandum, May 12, 2004, legislative meeting
- 2. Recent correspondence sent to City Council

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ATMENT /

City of Alexandria, Virginia

MEMORANDUM

DATE:

MAY 10, 2004

TO:

THE HONORABLE MAYOR AND MEMBERS OF CITY COUNCIL

FROM:

PHILIP SUNDERLAND, CITY MANAGER)

SUBJECT:

MIRANT POTOMAC RIVER POWER PLANT

ISSUE: As a follow up to the City Council Work Session on March 31, 2004, consideration of issues related to Mirant Potomac River Power Plant ("Plant").

RECOMMENDATION: That City Council:

- (1) Adopt the following as City <u>policy and long-term goal</u> with respect to the Mirant Potomac River Power Plant: that the Plant and its coal-fired, power-generation operations are not compatible with the Council's long-term vision for Alexandria, from both an environmental and land use perspective, and, accordingly, the City's policy and long-term goal is that all Plant operations cease and all Plant facilities be removed from Alexandria.
- (2) Adopt the following as City policy and short-term goal with respect to the Mirant Potomac River Power Plant: that the Plant will operate in as safe and clean a manner as is both feasible and attainable, including in the context of its stack emissions, fugitive dust emissions, coal deliveries and coal-handling operations, and that the Plant will comply with all applicable federal and state air quality and other regulations without the trading or purchasing of pollution credits that do not directly produce significant air quality benefits to Alexandria.
- (3) Approve the following City <u>policy</u> with respect to the permit expected to be issued for the Mirant Potomac River Power Plant in the near future by the Virginia Department of Environmental Quality (DEQ) and with respect to any consent agreement entered by DEQ and Mirant based on emissions violations at the Plant during the summer of 2003: that any required upgrades or changes to the pollution control equipment at the Plant, and any required new control equipment, will be consistent with the following conditions:
 - a. that the upgraded, changed or new equipment will reduce significantly the emissions of pollutants from the Plant;
 - b. that the upgraded, changed or new equipment will not, directly or indirectly, have any substantial negative consequences on air quality in Alexandria or on the quality of life in the City and, in particular, in areas near the Plant; and
 - c. that the investments in the upgraded, changes or new equipment are not of such a magnitude that they may cause the life of the Plant to be substantially extended, in conflict with City's long term goal in paragraph (1) above;

- (4) Approve the following City <u>position</u> with respect to the permit expected to be issued for the Mirant Potomac River Power Plant in the near future by DEQ and with respect to any consent agreement entered by DEQ and Mirant based on emissions violations at the Plant during the summer of 2003:
 - a. support installation of SOFA (an emissions control technology, "Separate Over Fired Air," designed to reduce NOx (nitrogen oxide) emissions) on Units 3, 4, and 5, in combination with phase out of Units 1 and 2; alternatively, support installation of SOFA on all units;
 - b. oppose any permit provisions that allow emissions trading or purchase of emissions credits for meeting emissions limits at the Plant that do not directly produce significant air quality benefits to Alexandria;
 - c. oppose control technologies that require the introduction and use of ammonia at
 - d. support and seek additional controls at fly-ash handling facilities at the Plant to address fugitive dust issues;
 - e. support and seek improvements to coal and coal dust handling facilities at the
 - f. request DEQ to undertake a comprehensive modeling exercise or air monitoring program to determine the impact of the Plant's emissions on ambient air quality in habitable spaces near the Plant, on the ground, in high rise buildings and in the community:
 - g. support and seek funding of supplemental environmental projects as part of any penalties Mirant will pay as a result of the Plant's 2003 (and other) violations;
 - h. continue to engage state and federal regulators concerning enforcement issues related to Mirant; and
 - obtain increased DEQ monitoring and inspections at the Plant to ensure compliance with permit conditions.

DISCUSSION: At the City Council work session on March 31, we discussed three of the more troublesome emissions from the Mirant Plant: oxides of nitrogen (NOx), which contribute to the summer ozone problems in the Washington, D.C., region; large particulate matter (PM 10), which contribute to the dust and grime experienced in the nearby neighborhoods; and smaller particulates less than 2.5 microns in diameter (PM2.5), which are increasingly associated in the literature with human health issues. With respect to the PM2.5 emissions, Dr. Robert Levy participated in the work session via phone from Boston, and reviewed the report he had prepared for the City.

Following the work session, staff have undertaken a number of actions relating to the Mirant Plant. These are summarized below.

State Operating Permit. DEQ is currently in the process of issuing a new operating permit to Mirant for its Potomac River Plant. The permit will place limitations on the Plant for NOx. A hearing on the permit was held at the Lee Center on April 12. The City submitted written comments to DEQ on this proposed operating permit for the Mirant Plant, a copy of which is attached (Attachment 1).

All of the Metropolitan Washington Area is in severe non compliance with the Ozone Standards in summer months. The City, being part of the region, should support the provisions of Severe Area State Implementation Plan (SIP) for Northern Virginia and the metropolitan Washington area. The proposed state operating permit is the enforcement mechanism to limit the NOx emissions from the Mirant Plant and to achieve significant NOx reductions during the ozone season. The City supports the NOx emissions limit in the proposed permit.

In order for the Plant to achieve the proposed NOx limits, pollution controls will have to be implemented. Pollution controls measures range in their efficiency, and types of process, and capital investment. Because of the concerns of their impacts on the immediate neighborhood, and the City at large, control measures that required the use of ammonia (including potential ammonia slips, transport and storage of the ammonia) are not supported by the staff. Instead, we recommend supporting control measures that will lower NOx emissions without the introduction of ammonia and without other significant negative impacts. Thus, the staff comment to DEQ was that the City would support the installation of SOFA (Separate Over Fired Air) on boiler Units 3, 4, and 5 at the Plant, in combination with a specifically defined and scheduled phase out of Units 1 and 2. This would result in a significant reduction of NOx emissions consistent with the non-attainment SIP. Alternatively, staff stated support for the installation of SOFA on all five units. The draft permit under review on April 12 did not permit Mirant to use emissions trading or the purchase of emissions credits to meet the permit's NOx requirements.

DEQ is still considering the new Mirant operating permit. We are not certain when a new permit will be issued. However, as noted below, we are soon to meet with DEQ and will discuss the City's interests in the permit and its position regarding the Plant at that time.

Downwash. In response to the Community's concerns about the impacts to the immediate neighborhood from potential downwash from Plant stack emissions, staff has requested that DEQ, before taking final action on the permit or pursuant to a condition expressly set out in the permit, undertake or require Mirant to undertake a comprehensive modeling exercise or air monitoring program to determine the impact of the facility's emissions on ambient air quality in habitable spaces on the ground, in nearby high rise buildings and in the community in the immediate vicinity of the plant. Although Mirant is required to comply with host of state and federal regulations, it was never required to do a comprehensive modeling study to evaluate impacts on nearby ambient air quality. By tying the NOx issue with the comprehensive modeling need, staff hopes that DEQ will conduct or require Mirant to conduct or fund such an analysis

Fugitive and Coal Dust. In response to concerns of neighborhood citizens regarding the impacts of the fugitive dust on their health and welfare, both in our comments and in discussions apart from the proposed permit, staff has requested that DEQ require Mirant, as a condition of the permit or any consent order regarding the Plant, to implement "best available control technologies" for particulate control at the Plant's coal handling and storage, and its coal and fly-ash unloading, facilities. An example of such technology would be the installation of a negative air pressure air handling system with filtration in buildings with operations that result in fugitive dust. These measures will help with neighborhood concerns without being in conflict with the City's long term goal.

Notice of Violation. Last year, DEQ issued a Notice of Violations (NOV) to Mirant arising from its NOx emissions during the summer of 2003. DEQ is currently in negotiations with Mirant concerning this NOV and how Mirant will comply with the NOx emissions limitations in a new permit. Staff has asked DEQ to consult with the City before any final decisions on a consent order are made. DEQ has agreed, and a meeting is being scheduled. Staff has urged DEQ that any penalties resulting from the NOV and negotiated as part of a consent order be used to fund additional local mitigation measures in Alexandria that reduce pollution locally. Staff has also requested that such penalties include (and not, in any sense, be limited to) all economic savings that Mirant has accrued as a result of its non-compliance (past and current) with applicable NOx and other emissions limits. Such penalty funding could be used to provide additional controls on coal and fly-ash handling facilities at the plant and to reduce harmful emissions from other sources in Alexandria.

Small Particulate Matter. In response to community's concerns related to health impacts and PM 2.5, Dr. Jonathan Levy of Harvard School of Public Health was commissioned by the City to evaluate the PM 2.5 issues and its impact on air quality and health of the City residents. Dr. Levy presented his findings to the City Council at the March 31 work session. The report has since been finalized, and a copy is attached (Attachment 2). A meeting with the Environmental Policy Commission, which of course is open to the public, is being planned where Dr. Levy will present his report and findings to the commission and public. As discussed at the work session with Council, the report provides important facts about the level and contributions of Mirant to PM2.5 levels in the City and on the health impacts of these contributions in Alexandria.

At the City's request DEQ has conducted limited special monitoring for PM2.5 and total PM for approximately three months at the Health Department at 517 North Saint Asaph Street, in the immediate neighborhood of the plant, less than 7 city blocks away from Mirant. The data collected found P.M. 2.5 concentrations in the City to be similar to those found throughout Northern Virginia. These results are consistent with the modeling and findings of Dr. Levy's Study of the City.

FISCAL IMPACT: The City is responsible for the normal administrative costs associated with these efforts.

ATTACHMENTS:

- City of Alexandria Comments letter to DEQ on Draft State Operating Permit
- Report: Analysis of Particulate Matter Impacts for the City of Alexandria, Virginia, Dr. 2. Jonathan Levy

STAFF:

Richard Baier, P.E., Director, T&ES Dr. Charles Konigsberg, M.D, Director, Alexandria Health Department William J. Skrabak, Division Chief, Environmental Quality, T&ES



City of Alexandria, Virginia

Department of Transportation and Environmental Services P. O. Box 178 - City Hall Alexandria, Virginia 22313



April 12, 2004

Director
Office of Regulatory Development
Department of Environmental Quality
629 East Main Street
P.O. Box 10009
Richmond, VA 23240

Re: City of Alexandria Comments on the Draft State Operating Permit and impending negotiations to resolve Notice of Violations for Mirant, Potomac River Generating Station located at 1400 N. Royal Street Alexandria, Virginia

Dear Sir:

This letter is in response to the Public Hearing Notice and request for comments concerning the proposed state operating permit for the Mirant, Potomac River Generating Station located at 1400 North Royal Street in the City of Alexandria. The following comments are on behalf of the City of Alexandria.

The City of Alexandria is a member of the Metropolitan Washington Air Quality Committee and supported the adoption of the Severe Area State Implementation Plan (SIP) for Northern Virginia and the metropolitan Washington area. This revision to the SIP, because of U.S. EPA rule called the "NOx SIP Call", requires that the emissions of oxides of nitrogen (NOx) from the Mirant Potomac River plant in Alexandria be limited to an average rate of 0.15 pounds per million Btu of heat input resulting in a NOx cap of 1,019 tons during the ozone season from May through September. The proposed state operating permit is the enforcement mechanism to limit the NOx emissions from Mirant Potomac River plant and achieve significant NOx reductions during the ozone season. The City strongly supports the NOx emission limit in the proposed permit.

However, the City has a number of concerns regarding this plant and its emissions, and requests that these concerns be addressed in the ways outlined below.

The City is concerned about how the NOx emission reductions required by the new permit will be achieved at the Potomac River Generating Plant. The current draft permit does not permit trading or the purchase of credits from reductions at other facilities. The City strongly supports this provision and opposes any use of trading or credit purchases to achieve compliance. The

City would support the installation of SOFA (Separate Over Fired Air) on Units 3, 4, and 5, in combination with a specifically defined and scheduled phase out of Units 1 and 2. This would result in a significant reduction of NOx emissions. Alternatively, the City would support installation of SOFA on all units, 1 through 5, as long as the NOx emissions limit is met through reduced energy production at this facility and not through trading or credit purchases.

The City of Alexandria is a densely populated urban area and is opposed to the installation at the Potomac River Generating Plant of any pollution control methods, such as SCR (Selective Catalytic Reduction) and SNCR (Selective Noncatalytic Reductions), that would require the use of ammonia in the process, potentially causing ammonia slip from stacks and potentially worsening primary particulate problems in the City. The City is also opposed to these control methods because of the significant safety issues raised by the transport, handling and storage of large quantities of ammonia that would be required at the facility. As a result, the City requests that it be consulted before any final decisions on control technologies that will be installed by Mirant are decided.

The City and the Alexandria community also are concerned about the impacts of this facility's NOx and other emissions on ambient air quality in Alexandria and the health of community residents. A particular concern is the potential impact on air quality and health of the short stacks of Mirant's Alexandria facility on nearby high rise buildings, and the potential for down wash in the community. The City requests that VDEQ, either before taking final action on this permit or pursuant to a condition expressly set out in any issued permit, undertake or require Mirant to undertake, a comprehensive modeling exercise or air monitoring program to determine the impact of the facility's emissions, including but not limited to NOx, on ambient air quality in habitable spaces on the ground, in nearby high rise buildings and in the community in the immediate vicinity of the plant.

The City also is concerned about fugitive dust emissions as the result of the operations at Mirant Potomac River plant. The City has consistently received complaints concerning fugitive dust emissions leaving the Mirant facility from the coal pile, and as a result of coal unloading and flyash loading operations, and landing in the immediate neighborhood. The City believes that current state regulations regarding fugitive dust emissions are not adequate for an urban community such as Alexandria where a large scale coal-fired power plant is located practically in the heart of a residential neighborhood. VDEQ's own analysis shows that particulates, including coal dust, are leaving the Mirant site, and make up to 50% of the dirt and dust found in the nearby neighborhood. The City requests that Mirant be required, as a condition of this permit or any consent order issued to or regarding this facility, to implement best available control technologies for particulate control at this facility for coal handling and storage and for coal and fly-ash unloading operations. An example of such technology would be the installation of a negative air pressure air handling system with filtration in buildings with operations that result in fugitive dust. This would go a long way in reducing fugitive emissions. This also would help allay the concerns of the neighborhood citizens regarding the impacts of the fugitive dust on their health and welfare.

Another major concern is Mirant's failure to comply with the existing state operating permit, issued in 2000, which limits the NOx emissions from the Mirant Potomac River plant during the

ozone season. VDEQ issued a Notice Of Violation (NOV) to Mirant on September 10, 2003, for failing to meet these emissions limits in the 2003 ozone season. It is the City's understanding that VDEQ is currently in negotiations with Mirant concerning the NOV and how Mirant will comply with the NOx emissions limitations in a new permit. The results of these negotiations will have long-term impacts in Alexandria and on our residents. Therefore, the City requests that it be consulted before any final decisions on a consent order are made.

The City urges that any penalties resulting from the NOV and negotiated as part of a consent order be used to fund additional local mitigation measures in Alexandria that reduce pollution locally. The City also urges that such penalties include (and not, in any sense, be limited to) all economic savings that Mirant has accrued as a result of its non-compliance (past and current) with applicable NOx and other emissions limits, and that Mirant will accrue in future years as a result of its ability to continue operations at the Potomac River plant without installation of best available control technology. Such penalty funds could be used to provide additional controls on coal and flyash handling facilities at the plant and to reduce harmful emissions from other sources in Alexandria.

The City appreciates the opportunity to submit these comments. If there are any questions concerning these comments, please contact William Skrabak, Chief, Division of Environmental Quality, at 703-838-4334.

NA L Brier Director

Transportation and Environmental Services

CC: The Honorable Mayor and Members of the City Council
Philip Sunderland, City Manager
William Skrabak, Chief, Division of Environmental Quality
Robert Burnley, Director, VDEQ
Jeffery A. Steers, Regional Director, NRO, VDEQ

EXECUTIVE SUMMARY: Analysis of Particulate Matter Impacts for the City of Alexandria, Virginia

Jonathan Levy, Assistant Professor of Environmental Health and Risk Assessment, Harvard School of Public Health

This report provides a detailed look at the influence of five power plants on air pollution and health in Alexandria, based on a previously published regional analysis. The focus is on fine particulate matter ($PM_{2.5}$), since studies have shown that respiratory and cardiovascular health are affected by $PM_{2.5}$ at current outdoor levels in Alexandria.

We modeled sulfur dioxide (SO_2), nitrogen dioxide (NO_2), and directly-emitted (primary) $PM_{2.5}$ emissions from Benning, Chalk Point, Dickerson, Possum Point, and Potomac River. We considered both current emissions and what the plants would emit if Best Available Control Technology were used.

The Potomac River plant contributes about 0.2-0.6 μ g/m³ of PM_{2.5} in Alexandria (where outdoor levels are about 13-15 μ g/m³). The variation within Alexandria is mostly from primary PM_{2.5}, since the secondary particulate matter (formed from SO₂ and NO₂ emissions) is more uniform across the city. The maximum impact of the Potomac River plant occurs in Washington, about 4 km from the plant.

When we consider all five power plants together, they contribute about 0.6-1.1 $\mu g/m^3$ of $PM_{2.5}$ in Alexandria. The five power plants contribute about 2.3 deaths, 0.7 cardiovascular hospital admissions, and 1.2 pediatric asthma emergency room visits per year within Alexandria. This is about 1% of the total regional impacts, given that only 0.2% of the regional population is found in Alexandria. If Best Available Control Technology were used, it would eliminate 1.7 deaths, 0.5 cardiovascular hospital admissions, and 0.9 pediatric asthma emergency room visits per year in Alexandria (31% of which are related to Potomac River).

Interpretation of these findings is complex. Although much of the PM_{2.5} in Alexandria would remain if these emission controls were implemented, the Potomac River plant is likely the single largest contributor to PM_{2.5} in Alexandria. It is also clear that emission control decisions must consider regional impacts if total public health benefits are a concern, but must also evaluate local impacts to ensure that populations are not disproportionately impacted. Our findings cannot provide a definitive policy recommendation, in part because we did not consider control costs and did not conduct detailed near-source modeling necessary to fully understand spatial patterns. However, this report provides some information about the relative importance of local and regional power plants for air pollution in Alexandria, which can be used to inform future policy decisions.

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Analysis of Particulate Matter Impacts for the City of Alexandria, Virginia

Jonathan Levy, Assistant Professor of Environmental Health and Risk Assessment, Harvard School of Public Health

Background

In 2002, I published an analysis with colleagues at Harvard School of Public Health that evaluated the public health benefits associated with hypothetical emission reductions at five power plants in the Washington, DC area (Levy et al., 2002a). This publication documented the impacts that emission controls at these five power plants would have on fine particulate matter ($PM_{2.5}$) levels in the region, and estimated the associated health benefits (including reduced premature deaths, hospital admissions for cardiovascular disease, and emergency room visits for pediatric asthma).

Since that work was completed, there has been interest in a more comprehensive understanding of the implications of the study for the City of Alexandria, Virginia. Alexandria is home to the Potomac River power plant, one of the five plants studied in our analysis, and there are obvious questions about the magnitude of benefits in Alexandria associated with emission controls at Potomac River. There are also broader questions about how these benefits compare with the benefits from controlling other pollution sources, including the other four power plants we studied and other sources of PM_{2.5}.

In this report, I attempt to provide more detailed information aimed at helping citizens and decision makers in Alexandria to appropriately interpret the results of our study and make the best public policy decisions possible. I first provide some general background about $PM_{2.5}$ in and around Alexandria and about the five power plants we studied. I then estimate the contribution of the Potomac River power plant to concentrations in Alexandria and across the region, and I compare this with the contributions from the other four power plants studied. I calculate the health impacts of each power plant within the City of Alexandria, and estimate the benefits of applying emission control technology. I conclude with a general discussion of the implications of these findings.

It is important to state upfront that the evidence in this report does not by itself imply that any specific policy decisions should be made, in part because I only consider a subset of the pertinent questions. For example, the costs or feasibility of controls are not addressed, nor are the full array of impacts from the plants. This report does not provide specific policy recommendations, but rather aims to provide quantitative, science-based evidence that can be used to inform decisions.

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What is PM_{2.5}, and why are we concerned about it in Alexandria?

Before discussing the findings of our study, it is worth providing some basic background about the air pollutant of interest – fine particulate matter ($PM_{2.5}$). Although other air pollutants influence public health, our study (and the findings reported below) only addresses the impacts of $PM_{2.5}$.

The formal definition of particulate matter is any solid or liquid substance suspended in the air. It therefore includes a large number of different constituents, of different sizes and different chemical composition. Particulate matter is often described by its size, considering all different constituents together. PM2.5 refers to the fraction of particles that are less than 2.5 μm in diameter (there are one million μm in a meter). This is a definition of interest because particles this size are best able to travel to the lower portions of the lung, and would be most likely to contribute to health effects.

Particulate matter can exist in one of two basic forms. It can either be directly emitted from a source, or it can be created through chemical reactions in the atmosphere. Directly emitted particulate matter, like fly ash or carbon particles from diesel vehicles, is known as primary particulate matter. Particulate matter formed through chemical reactions, like sulfate and nitrate particles formed due to sulfur dioxide (SO₂) and nitrogen oxide (NOx) emissions, is known as secondary particulate matter. I will use these terms throughout the report.

Fine particulate matter (PM_{2.5}) is of interest in this context for two major reasons. First, there has been extensive health evidence linking PM_{2.5} with a variety of adverse health impacts, including respiratory symptoms, hospitalizations for respiratory or cardiovascular disease, and premature mortality. The evidence supporting this relationship is too extensive to discuss in detail here, but some of the major studies are referenced in our article (Levy et al., 2002a), and many others are documented in the US EPA Criteria Document (US Environmental Protection Agency, 2003a).

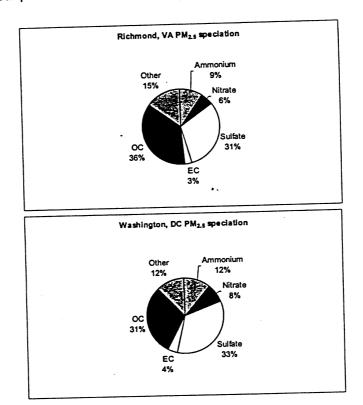
For the purpose of this report, an obvious question is whether $PM_{2.5}$ in Alexandria would be expected to contribute to public health impacts. To answer this question, we need to know two things: what is the composition and concentration of $PM_{2.5}$ in Alexandria, and does the health evidence show that this level of $PM_{2.5}$ has health implications?

Regarding the first question, I am not aware of detailed assessments of the PM_{2.5} composition in Alexandria itself, but analyses based in the Washington, DC region are informative about general concentration patterns. Speciated PM_{2.5}

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data are available at http://www.epa.gov/air/oaqps/pm25/analysis.html for a site in Washington, DC and for a site in Richmond, VA. Figure 1 depicts the composition of PM_{2.5} at these two sites on an annual average basis.

Figure 1: Composition of PM_{2.5} in Richmond, VA and Washington, DC.



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Figure 1 illustrates that in the Washington, DC area, slightly more than one-third of fine particulate matter is related to elemental carbon (EC) or organic carbon (OC), which are generally more strongly associated with motor vehicles than with power plants. About half of PM_{2.5} is associated with ammonium, sulfate, or nitrate, which are generally secondarily formed particles often related to power plants. Ammonium sulfate, which dominates the secondarily formed particles, is almost entirely related to power plant emissions. The above figures also demonstrate that the particle composition only varies slightly between settings in close proximity to one another, indicating that these figures likely reasonably capture particle speciation in Alexandria.

Now, what is known about the magnitude of PM_{2.5} concentrations in Alexandria? For this, I turn to information from the Virginia Department of Environmental Quality (http://www.deq.state.va.us/airmon/pm25home.html). For monitors in the Northern Region of Virginia (including measurements in Arlington, Fairfax, and Loudon Counties), annual average PM_{2.5} concentrations consistently ranged between 13 and 15 μ g/m³ from 1999 to 2003. In addition, data from Virginia DEQ consistently demonstrates higher concentrations during the third quarter (July-September) than during other quarters. This pattern is typical in settings where ammonium sulfate comprises a significant portion of PM_{2.5}, because sulfate particles form more readily at higher temperatures and more electricity is used during the summer (for air conditioning) than during other seasons. Thus, it is reasonable to assume that annual average PM_{2.5} concentrations in Alexandria are approximately 13-15 μ g/m³, with a pronounced summertime peak.

Turning to the second question above, is there evidence that PM_{2.5} concentrations of approximately 13-15 $\mu g/m^3$ on an annual average basis could contribute to human health impacts? A critical fact to realize is that, although the National Ambient Air Quality Standard for PM_{2.5} (which is currently 15 $\mu g/m^3$) is above these levels, the National Ambient Air Quality Standard (NAAQS) is not meant to be a zero-risk level.

Quoting from the US EPA, "The Act does not require the Administrator to establish a primary NAAQS at a zero-risk level, but rather at a level that reduces risk sufficiently so as to protect public health with an adequate margin of safety" (US Environmental Protection Agency, 1997). Although many people commonly interpret a NAAQS as a threshold below which no health effects are found, this is not necessarily a correct interpretation. One must look to the health evidence to determine whether current PM_{2.5} levels in Alexandria might cause health problems.

Two of the major studies examining mortality risks from long-term exposure to

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PM_{2.5} are the Harvard Six Cities Study (Dockery *et al.*, 1993) and the American Cancer Society Study (Pope *et al.*, 1995; Pope *et al.*, 2002). In both of these studies, there did not appear to be a threshold for PM_{2.5} effects at the pollution levels measured in the studies. In other words, the risk of dying continued to decrease as the pollution level decreased, down to the lowest levels measured in the studies. Annual average PM_{2.5} concentrations in the Harvard Six Cities Study ranged between about 11 and 30 μ g/m³, while the concentrations in the American Cancer Society study ranged between about 9 and 34 μ g/m³ during the initial study (Pope *et al.*, 1995) and between about 6 and 21 μ g/m³ during a later follow-up period (Pope *et al.*, 2002).

Although there is clearly more uncertainty about effects at lower levels, given fewer historical observations, the first draft of the Particulate Matter Staff Paper (US Environmental Protection Agency, 2003b) made the following observations:

- "Studies reporting statistically significant associations in areas where the long-term mean 24-hour PM_{2.5} concentrations ranged from approximately 14 μg/m³ down to 8.5 μg/m³ provide evidence of PM_{2.5}-related total and cardiovascular mortality and emergency department visits related to asthma and cardiovascular illness at levels below the current annual standard" (p. 6-18)

"Studies conducted in Phoenix (Mar et al., 2000), Santa Clara County, CA (Fairley, 1999) and in eight Canadian cities (Burnett et al., 2000) reported significant relationships between PM_{2.5} and mortality where mean PM_{2.5} concentrations ranged between 13 and 14 μg/m³" (p. 6-18)

"...staff believes that it would be appropriate to consider a range of PM_{2.5} levels for an annual standard that extends down from 15 μg/m³ to as low as 12 μg/m³" (p. 6-19)

Thus, although uncertainty remains, it is reasonable to conclude that PM_{2.5}-related health effects could be anticipated in Alexandria at current ambient concentrations.

Where are the five power plants in question, and what are their current emissions?

For our analysis, we evaluated five power plants that were within 50 miles of Washington, DC, and that were grandfathered under the Clean Air Act. This implies that these plants are not required to meet the same emission standards as newer power plants, although there are other regulations they must follow. Basic information about the five power plants is presented in Table 1 (adapted from Table 1 in (Levy et al., 2002a)).

Table 1. Characteristics of power plants evaluated in this study.

	Benning	Chalk Point	Dickerson	Possum Point	Potomac River
Location	Washington, DC	Aquàsco, MD	Dickerson, MD	Dumfries, VA	Alexandria, VA
Initial year of commercial	1968	1964	1959	1948	1949
operation Nameplate capacity (megawatts)	580	2046	588	1373	514
Heat input (million BTU, 1999)	3,304,107	85,352,274	33,592,811	28,930,805	32,100,184
Emissions (tons, 1999)					
SO ₂	1,432	57,630	30,637	19,497	17,627
NOx	447	25,222	10,709	5,116	6,893
PM _{2.5}	12	304	14	156	106
Emissions (lb/million					
BTU)	0.87	1.35	1.82	1.35	1.10
SO ₂	0.87	0.59	0.64	0.35	0.43
NOx PM _{2.5}	0.007	0.007	0.0008	0.011	0.007

A few observations can be made about these data. First, emission rates vary somewhat from year to year, so the contributions of the five power plants would

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vary from year to year as well. More explicitly, if there were increases or decreases in emissions since 1999, there would be a corresponding change in concentrations and health impacts. In addition, the target emission rates (defined as the application of Best Available Control Technology) were assumed to be 0.3 lb/million BTU for SO₂, 0.15 lb/million BTU for NOx, and 0.01 lb/million BTU for PM₁₀. Looking at the last three rows of the table, meeting this level would be a substantial reduction of both SO₂ and NOx. For PM_{2.5}, the degree of reduction varies, depending on the current size distribution of primary particulate matter emissions at the five plants.

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What are the concentration impacts from the Potomac River power plant, in Alexandria and across the region?

When we consider the impacts from the Potomac River power plant, it is helpful to look at this question from a few perspectives. We can consider primary and secondary PM_{2.5} separately, as well as considering the total PM_{2.5} impacts, to get a sense of differences in spatial patterns. While we are most concerned about the total, some emission control plans may only address one of the pollutants, so it is helpful to see how the concentration patterns differ. We can also look at concentrations from a regional perspective, or with a "close up" view of Alexandria. When we take the "close up" view of Alexandria, we can include nearby cities (like Washington) to help interpret the findings. By looking at the question in all of these ways, we can gain insight about the magnitude and distribution of impacts from Potomac River.

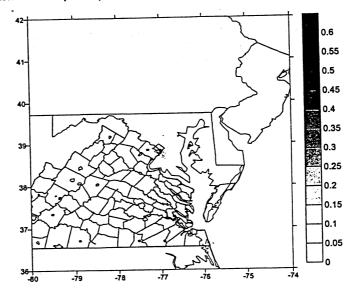
Before doing this, it is important to understand how the following maps were made and what they mean. The concentrations were estimated for each census tract in Alexandria and nearby areas. Census tracts are subsets of counties that contain about 1,000 to 8,000 people on average. So, our model cannot provide information on finer-scale concentration impacts. The regional maps are "contour plots", which show the general concentration trends, smoothing out some of the small-scale differences. The Alexandria plots (which also include Washington) show the exact concentration increments in each census tract, so they are less "smooth". Sometimes, the concentrations in the Alexandria plots seem to follow unintuitive patterns, but this is in part because they are based on the geographic centroid of the census tract and are not estimated across the entire tract. In addition, the figures represent annual average concentrations, so the plume may travel in one direction some of the time and another direction some of the time, which would appear in the figure as higher concentrations in multiple directions. Finally, it is important to keep in mind that the figures below depict the concentrations only associated with the modeled power plant(s), not from all sources.

First, we look at primary PM_{2.5} from the regional perspective. In the following figure, and in all subsequent regional figures, the blue dot represents the Potomac River power plant, the shaded yellow area indicates the City of Alexandria, and the red contours represent the concentration patterns. Figure 2 on the following page shows the annual average primary PM_{2.5} concentration increments associated with the Potomac River power plant.

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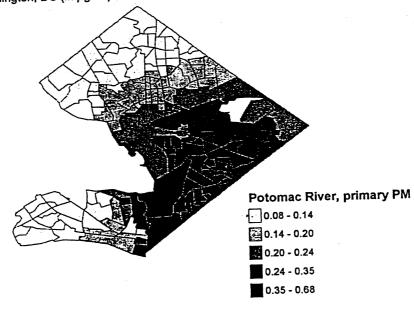
Figure 2: Annual average primary $PM_{2.5}$ concentration increments associated with the Potomac River power plant across the model region (in $\mu g/m^3$).



A few observations can be made. First, the concentrations peak close to the source and decrease rapidly with distance. The highest primary $PM_{2.5}$ concentration increment is approximately 0.7 $\mu g/m^3$, located within Washington, DC, approximately 4 km from the Potomac River power plant. This is because it takes some time for the plume to reach the ground. As shown in Figure 3, there is a significant primary $PM_{2.5}$ gradient across Alexandria, with the concentration increment from Potomac River ranging from 0.08-0.45 $\mu g/m^3$. Higher levels occur in closer proximity to the plant, although the census tract housing the Potomac River plant has relatively lower concentrations.

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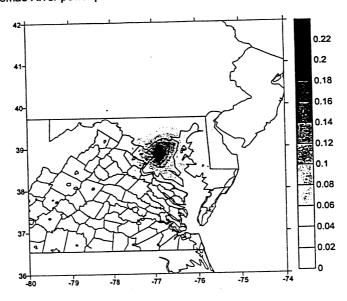
Figure 3: Annual average primary PM_{2.5} concentration increments associated with the Potomac River power plant across the City of Alexandria and Washington, DC (in $\mu g/m^3$).



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For secondary PM, we would anticipate a lesser concentration gradient, since it takes time to form secondary sulfate and nitrate particles. Figure 4 shows the annual average secondary PM $_{2.5}$ concentrations associated with the Potomac River power plant.

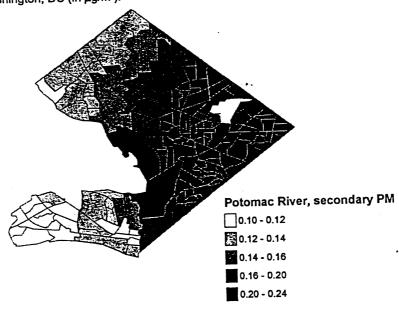
Figure 4: Annual average secondary PM_{2.5} concentration increments associated with the Potomac River power plant across the model region (in $\mu g/m^3$).



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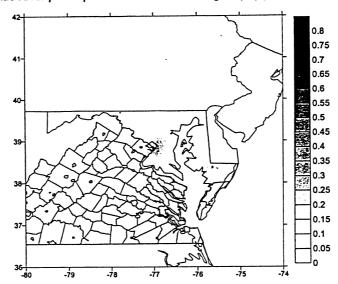
As expected, the concentration impacts are more diffuse, with a more gradual decrease in concentrations as a function of distance. The maximum secondary $PM_{2.5}$ concentration increment is approximately 0.24 $\mu g/m^3$, occurring at a different spot within Washington, DC than the maximum primary $PM_{2.5}$ concentration increment, approximately 12 km from the Potomac River power plant. In general, the peak impact occurs at longer range than for primary $PM_{2.5}$. Within Alexandria, the secondary $PM_{2.5}$ concentration increment ranges from 0.10–0.15 $\mu g/m^3$, a lesser gradient than seen for primary $PM_{2.5}$ (Figure 5).

Figure 5: Annual average secondary $PM_{2.5}$ concentration increments associated with the Potomac River power plant across the City of Alexandria and Washington, DC (in $\mu g/m^3$).



Finally, we can add up primary and secondary PM to yield total $PM_{2.5}$. Figure 6 shows the annual average total $PM_{2.5}$ concentration increments associated with the Potomac River power plant.

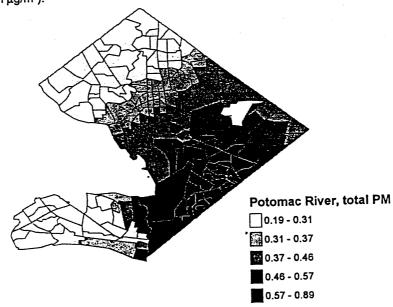
Figure 6: Annual average total $PM_{2.5}$ concentration increments associated with the Potomac River power plant across the model region (in $\mu g/m^3$).



As expected, the concentration pattern is somewhere in between the patterns for primary and secondary PM_{2.5}. The highest total PM_{2.5} concentration increment is approximately 0.9 μ g/m³, at the same site in Washington, DC where the primary PM_{2.5} increment was highest. This is not unexpected, since the maximum primary PM_{2.5} increment is somewhat higher than the maximum secondary PM_{2.5} increment. Within Alexandria, the total PM_{2.5} concentration increment from the Potomac River power plants ranges between 0.19 and 0.58 μ g/m³ (Figure 7).

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Figure 7: Annual average total $PM_{2.5}$ concentration increments associated with the Potomac River power plant across the City of Alexandria and Washington, DC (in $\mu g/m^3$).



Now, how can these values be interpreted? As mentioned above, the annual average $PM_{2.5}$ concentration in Alexandria in 1999 (our case study modeling year) was about 14 $\mu g/m^3$. This implies that, depending on the location in Alexandria, the Potomac River power plant contributes anywhere from 1-4% of the total ambient $PM_{2.5}$. The obvious question is whether this constitutes a significant fraction or not. Although it implies that eliminating the Potomac River power plant would only decrease $PM_{2.5}$ concentrations by a relatively small percentage, the same argument is likely true for any single source taken in isolation. The more important questions are therefore what benefits could be obtained by alternative emission control plans, how those benefits compare across pollution sources, and whether the public health benefits of these emission controls justify the costs. In the next section, I address the question of whether controlling other power plants in the region would lead to greater or lesser concentration reductions within Alexandria than controlling Potomac River.

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What are the impacts of the other four power plants on PM_{2.5} concentrations in Alexandria, and how does this compare with the impact from Potomac River?

For this section, I only consider the impacts of the five power plants on PM_{2.5} concentrations within the City of Alexandria, to answer the specific question of whether controlling higher-emitting power plants further away from Alexandria would provide greater or lesser benefits than controlling the Potomac River power plant. So, only "close in" figures are presented. As previously, I consider primary and secondary PM_{2.5} separately before considering total PM_{2.5}.

When considering primary PM_{2.5}, because of the steep concentration gradient, one would expect that power plants further away from Alexandria would have a relatively small influence on concentrations within Alexandria, but that nearby upwind power plants would have a measurable influence. Indeed, this turns out to be the case. As shown in Table 2, the Potomac River plant is generally the greatest contributor to power plant primary PM_{2.5} among the five power plants modeled, but Possum Point, Dickerson, and Chalk Point make some contributions. Figure 8 illustrates that the percentage of the total primary PM_{2.5} impact from the five power plants that is contributed by Potomac River is as high as 70% near the facility, decreasing to 30-40% further away, with a similar spatial pattern as for primary PM_{2.5} concentrations from Potomac River.

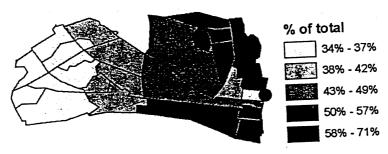
Table 2. Annual average $PM_{2.5}$ concentration increments within the City of Alexandria associated with five modeled power plants (in $\mu g/m^3$).

Power plant	Primary PM _{2.5} increment	Secondary PM _{2.5} increment	Total PM _{2.5} increment
Benning	0.001-0.002	0.003-0.004	0.005-0.006
Chalk Point	0.020-0.024	0.10-0.11	0.12-0.14
Dickerson	0.041-0.046	0.072-0.076	0.11-0.12
Possum Point	0.087-0.11	0.11-0.12	0.19-0.24
Potomac River	0.081-0.45	0.10-0.15	0.19-0.58
Total	0.24-0.63	0.39-0.47	0.63-1.1

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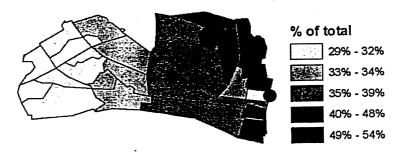
Figure 8: Percentage of the annual average primary PM_{2.5} concentration increment in the City of Alexandria from the five power plants that is associated with the Potomac River power plant.



For secondary PM_{2.5}, since the concentration gradient is not as steep, the relative contribution of the Potomac River power plant is somewhat lower and is more uniform across the City of Alexandria. The percentage contribution of Potomac River ranges from 25-33%, although in nearly all cases, it is the single largest contributor among the five power plants.

For total $PM_{2.5}$, the Potomac River power plant contributes between 29% and 54% of the $PM_{2.5}$ concentration increment from the five modeled power plants, with higher contributions found closer to the plant (Figure 9). For five of the 34 census tracts, Possum Point makes a greater contribution to $PM_{2.5}$ levels than does Potomac River, but Potomac River is the largest contributor in the other 29 census tracts.

Figure 9: Percentage of the annual average total PM_{2.5} concentration increment in the City of Alexandria from the five power plants that is associated with the Potomac River power plant.



In terms of the overall interpretation of these values, it is important to remember that the percentages represent the amount of the contribution from the five power plants that Potomac River provides, not the amount of total PM_{2.5} exposure. The aggregate contribution of these five power plants to PM_{2.5} levels in Alexandria ranges from about 0.63-1.1 μ g/m³ on an annual average basis. When compared with ambient PM_{2.5} levels, this is about 4-8% of monitored concentrations.

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What are the estimated health impacts in Alexandria associated with the five power plants?

As indicated in our published study (Levy et al., 2002a), we estimated health impacts two different ways in our analysis. The first approach was to use the standard methodology employed in most studies, linking health evidence with concentrations directly. The second approach was to try to take account of factors that might influence susceptibility to air pollution – for example, diabetics have been shown to have greater risk of cardiovascular effects from air pollution exposure (Zanobetti and Schwartz, 2001). For this report, I focus on the first approach for simplicity's sake and to facilitate comparison with other studies.

In our study, we concluded that current emissions from the five power plants combined contribute to 270 deaths per year across the region, along with 80 cardiovascular hospital admissions (CHA) among the elderly and 190 pediatric asthma emergency room visits (ERV) per year. The number of deaths is higher than the less severe health outcomes because the morbidity outcomes are for a subset of diseases and ages, and because they are only based on short-term pollution exposures.

The question is: Of this total, what fraction occurs within Alexandria? Although particulate matter exposures from the five power plants are high in Alexandria when compared with the rest of the model region, the population of Alexandria represents about 0.2% of the population in the region. So, we would expect that only a small fraction of the total health impacts would occur in Alexandria.

Table 3 depicts the annual health impacts within Alexandria associated with each of the five power plants, using 1990 census data for comparability with our published study and with our model outputs. Of note, the population of Alexandria has increased from 111,183 to 128,283 from 1990 to 2000, a 15.4% increase, so the health impacts would be proportionately greater for the current and projected future population of Alexandria. However, the general conclusions are unchanged.

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Table 3: Estimated annual public health impacts in the City of Alexandria associated with emissions from five power plants.

	Deaths/year	CHA/year	Asthma ERV/year
Benning	0.02	0.005	0.009
Chalk Point	0.4	0.1	0.2
Dickerson	0.4	0.1	0.2
Possum Point	0.7	0.2	0.4
Potomac River	0.9	0.3	0.4
Total	2.3	0.7	1.2
% of total from Potomac River	37%	37%	36%
% of total in region	0.9%	0.9%	0.6%

Some observations are necessary to place these estimates in context. First, the five power plants are estimated to contribute slightly over 2 deaths/year to the City of Alexandria. The baseline number of deaths in Alexandria each year in the 30+ age group (the assumed at-risk population for air pollution-related deaths) is approximately 800. So, our model is indicating that these five power plants contribute to about one out of 400 deaths, or 0.25%. It should also be noted that the number of annual deaths and morbidity outcomes contains some fractional values, which can best be interpreted when thinking about the long run -2.3 deaths/year means that over a 10 year period, 23 deaths would be expected.

In addition, of the risk within Alexandria from the five power plants, about 37% can be attributed to the Potomac River power plant. This is a function of how much $PM_{2.5}$ is contributed by each power plant (Figure 9), weighted by the number of people in each census tract. Finally, these health impacts within Alexandria are slightly less than 1% of the total health impacts across the region, as estimated in our original publication and reported above. This is greater than the population contribution of Alexandria to the region, because the $PM_{2.5}$ contribution is relatively higher in Alexandria than in many parts of the region.

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What are the estimated health benefits in Alexandria if emission controls were used at the five power plants?

Given this baseline level of mortality and morbidity, we can estimate the potential health benefits if the five power plants were to adopt Best Available Control Technology. As described above, this would involve substantial emission reductions that vary in magnitude across the pollutants and the plants, making the distribution of benefits slightly different than the distribution of current health impacts.

In our original study (Levy et al., 2002a), we estimated that applying Best Available Control Technology to the five power plants would reduce health impacts across the region by 210 deaths, 59 cardiovascular hospital admissions among the elderly, and 140 pediatric asthma emergency room visits per year (from a baseline of 270, 80, and 190, respectively). As above, I address the question here of the fraction of the total benefits found within Alexandria. The results of this analysis are summarized in Table 4.

Table 4: Estimated annual public health benefits in the City of Alexandria if five power plants used Best Available Control Technology.

	Deaths/year	CHA/year	Asthma ERV/year
Benning	0.007	0.002	0.004
Chalk Point	0.3	0.09	0.2
Dickerson	0.3	0.09	0.2
Possum Point	0.5	0.2	0.3
Potomac River	0.5	0.2	0.3
Total	1.7	0.5	0.9
% of total from	31%	31%	31%
Potomac River			
% of total in region	0.8%	0.8%	0.6%

The benefits from emission controls are distributed similarly as the baseline impacts, with some minor differences. The contribution of Potomac River to benefits is slightly less than its contribution to baseline impacts (31% of the total from the five power plants, versus 37%). This is because the potential emission reductions are slightly greater for many of the other power plants. For example, Chalk Point, Dickerson, and Possum Point all have a greater baseline emission rate of SO₂ in lbs/million BTU than Potomac River, implying that a greater fraction of their current impacts will be reduced by meeting Best Available

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Control Technology emission rates. However, controls at Potomac River would provide among the greatest benefits to public health in Alexandria, with essentially identical benefits available through controlling Possum Point.

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What do these findings mean (and not mean)?

The above figures and tables provide detailed information about the impacts of selected power plants in the Washington, DC area on air quality and public health in and around Alexandria. However, the crucial question is obviously what this means and does not mean for public policy.

When looking at current emissions, we can conclude that the Potomac River power plant is the largest single contributor to ambient PM_{2.5} in most parts of Alexandria among the five power plants modeled, but that the other four plants combined contribute 46-71% of the total from these five plants. When we look at the benefits of emission controls, the Potomac River power plant has a relatively lower contribution (31% of the total health benefits), but is still one of the two power plants contributing the most benefits (with Possum Point providing nearly identical benefits).

If we try to place the magnitude of the impacts from these five power plants in context, we see that current emissions contribute approximately 0.6-1.1 μ g/m³ of PM_{2.5} on an annual average basis (4-8% of ambient concentrations), with emission controls reducing concentrations by 0.5-0.7 μ g/m³ (3-5% of ambient concentrations). From one perspective, this may appear like a relatively small percentage, since 95-97% of PM_{2.5} would remain after these emission controls were implemented. However, it is important to compare this percentage with the concentration reductions that could be obtained through other emission control strategies. Because there are numerous power plants, millions of motor vehicles, other pollution sources, and some underlying background PM_{2.5}, one might anticipate that any small set of sources will contribute a similarly small fraction of ambient concentrations.

For example, using the results from a source-receptor matrix applied by US EPA in past regulatory impact analyses (US Environmental Protection Agency, 1999), if all light-duty and heavy-duty cars and trucks in the state of Virginia were eliminated (including both gasoline and diesel vehicles), annual average $PM_{2.5}$ concentrations in Alexandria would decrease by approximately 1.5 $\mu g/m^3$. Since eliminating all vehicles from Virginia is obviously not a remotely plausible control strategy, the benefits for vehicle control strategies at the state level would be a small fraction of this total.

Applying the same source-receptor matrix to power plants, a 75% emission reduction from the five power plants we evaluated would reduce $PM_{2.5}$ concentrations in Alexandria by 0.3 $\mu g/m^3$, while the same emission reduction at 502 other major power plants in the United States would reduce $PM_{2.5}$

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concentrations in Alexandria by an additional 1 μ g/m³. Thus, the amount of concentration reduction available through controlling these five power plants is reasonably high in comparison with other plausible emission control strategies. Note that the absolute magnitude of benefits is slightly different with this source-receptor matrix than with our model, both because of differences in assumed emissions and model assumptions. Although the absolute numbers in this sample calculation may not be precisely correct, the relative values and general conclusions are well supported.

It is also important to keep in mind that, while the numbers above were presented without any characterization of uncertainty, there are clearly multiple factors that are uncertain and could influence the magnitude of the estimates. The emissions values that we used represent reported emissions in 1999, but current or future emissions may differ. Our atmospheric dispersion model (CALPUFF) has been approved by US EPA for modeling of long-range pollution transport, and we have found that the CALPUFF model yields similar health risk estimates as other models (Levy et al., 2003). However, any dispersion model contains some inherent uncertainties.

In addition, since CALPUFF has been designed for long-range pollution transport, it is not ideal for understanding extremely small-scale pollution patterns. We chose CALPUFF because we were interested in estimating the total health benefits of pollution control, which is largely a phenomenon of long-range pollution transport. While the patterns at the census tract level appear reasonable, the findings from our modeling effort cannot be used to determine (for example) the precise impacts on individuals very close to the power plant. Addressing this question would require additional modeling using a different model, and perhaps with a focus on short-term rather than long-term concentrations.

Looking at the health estimates, the magnitude of the mortality and morbidity effects are based on observational epidemiological studies that are somewhat uncertain, because it is difficult to estimate a precise relationship between air pollution and health given other risk factors. The question about whether a threshold for health effects exists is obviously an important and controversial one, with major implications for the interpretation of our findings.

That being said, the assumptions made in our analysis are reasonable. Whenever possible, we chose values in the middle of the range of reported values, so that we are just as likely to have overestimated or underestimated health effects (Levy and Spengler, 2002; Levy et al., 2002b). More generally, health risk assessments will always contain some underlying uncertainty. More studies can always be done, and better models are constantly being built. The

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mere existence of uncertainty is not a sufficient reason to delay regulatory decisions, especially when the level of knowledge is already high and the stakes are substantial.

On that point, it is important to realize that a model of this sort is the only possible way to determine the relative contributions of Potomac River (or other power plants) to air pollution and health in Alexandria. Assuming that Potomac River contributes 1-4% of ambient PM_{2.5} in Alexandria, it would be impossible to use ambient monitors to estimate this contribution. Similarly, if the five power plants combined contribute 2 deaths per year in Alexandria, there would be no way to directly observe this influence, independent from other causes of death (especially since death certificates will not say "air pollution" on them). Thus, if we want to understand the influence of a subset of sources on the population of a city, we must apply a model like the one we developed.

Given these caveats, what conclusions can be drawn from this investigation? First, while the Potomac River power plant is not the dominant contributor to either deaths or PM_{2.5} concentrations in Alexandria, it is likely the single source that contributes most to PM_{2.5} levels in Alexandria. Reducing emissions from the five modeled power plants would lower PM_{2.5} concentrations in Alexandria and the surrounding region, although some PM_{2.5}-related health risks could still remain. It is also quite clear that decisions about emission controls at power plants need to take account of the regional health impacts, since local health impacts contribute a relatively small fraction of the total. At the same time, there are clear concentration gradients across and within cities, and it is important to understand how individuals would benefit from various emission control plans.

As mentioned at the beginning of the report, it is not possible to make specific policy recommendations based solely on our analyses. However, this report should provide a more detailed understanding of how local, regional, and national sources contribute to air pollution health risks in Alexandria, which can be used to inform future policy decisions.

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Andrew H. Macdonald, Ph.D. Councilman

CITY OF ALEXANDRIA, VIRGINIA

301 King Street, Suite 2300 Alexandria, Virginia 22314



May 31, 2004

TO: Hon. Mayor and Members of Council

CC: City Manager Phil Sunderland

FROM: Councilman Andrew Macdonald

City H = 703) 938-4500 Studio (703) 543-2672 T&ES ADAINISTRATION D

RE: Alexandria Clean Air Policy: Mirant's Potomac River Power Plant

The City Manager recommends that Mirant's Potomac River Power Plant be allowed to operate in Alexandria for another ten years. In exchange, Mirant must reduce nitrogen emissions and halt pollution trading at the plant. I don't think we should permit this 55 year-old coal-fired utility plant to pollute our air and water for another ten weeks, let alone another ten years. If the necessary technological improvements cannot be made, because of cost factors or space limitations, then the plant should close. It's that simple.

In addition to carbon dioxide (CO2), coal-burning plants like the Potomac River Power Plant currently emit or dispose of a variety of toxic chemicals, including:

- 1) Mercury (Hg)
- 2) Arsenic (As)
- 3) Lead (Pb), cadmium (Cd), and other toxic heavy metals
- 4) Carbon Monoxide (CO)
- 5) Volatile Organic Hydrocarbons (VOC's)
- 6) Oxides of nitrogen (NOX)
- 7) Oxides of Sulfur (SOX)
- 8) Airborne particulate matter (PM), from 10 microns to as small as 2.5 microns
- 9) Coal dust and fly ash

I recommend that we target all these chemicals for removal or control. Mirant must install state-of-the-art clean air technologies to capture or neutralize these chemicals before they are released into the air and water, and take steps to reduce fugitive dust levels in the air around the facility.



Andrew H. Macdonald, Ph.D. Councilman

CITY OF ALEXANDRIA, VIRGINIA

301 King Street, Suite 2300 Alexandria, Virginia 22314



Tree City USA

City Hall (703) 838-4500 Studio (703) 548-7572 macdonaldcouncil@msn.com

Mirant Power Plant (page 2)

I do agree with the City Manager:

1) That all pollution trading should stop

2) That a detailed "downwash" study be conducted to determine the immediate health impact of any toxic plume from the plant's four smokestacks on the residents of Alexandria.

But I also recommend:

- 1) That Mirant conduct a detailed "in-stack" chemical analysis of the combustion gases in the plant's four smokestacks.
 - That the City expand its network of PM 2.5 micron monitors and collect additional particulate speciation data.

Policy Recommendation:

Mirant should install Best Available Control Technologies (BACT) at its Potomac River Power Plant, or convert it to natural gas. The plant should cease operations immediately if the health risks associated with this plant cannot be eliminated or significantly reduced. In the event that Mirant doesn't, or cannot, comply with these recommendations, instruct the City Manager to provide Council with a range of legal options that it might use to implement these policy goals.

CC: Mr. Poul Hertel
Ms. Elizabeth Chimento
Mt. Vernon Chapter of the Sierra Club
Congressman Jim Moran



Honorable Mayor and Members of the City Council City Hall 301 King Street City Of Alexandria

Dear Mayor Euille and Members of the City Council:

Please find enclosed our position on the Mirant power plant.

Sincerely,

Elizabeth Chimento 1200 North Pitt Street Alexandria VA. 22314

Poul Hertel 1217 Michigan Court Alexandria VA 22314 Roger Waud, President NOTICe 501 Slaters Lane Alexandria VA, 22314 Lillian J. White, Co-President League of Women Voters of 119 West Mason Avenue Alexandria VA, 22301

ALEXANDRIA. VA 06/7/2004 进N -8 A 10:57 Honorable Mayor and Members of the City Council City Hall 301 King Street City Of Alexandria

Dear Mayor Euille and Members of the City Council:

We request the City Council adopt a position stating that the power plant has two years to install "Maximum Achievable Control Technology," shut down, or convert to natural gas.

The Council discussions do not provide a proposal that addresses Particulate Matter (PM25). The City is focusing on NOx instead, which is a regional, not a local issue. The Mirant Power Plant "is likely the single largest contributor to PM25 in Alexandria" with higher concentrations occurring closer to the plant, according to Dr. Levy. Furthermore, Levy states:

Particulate Matter is recognized to have serious health effects.

Science cannot find a lower threshold under which there are no health effects.

EPA staff, acknowledging the deleterious health effects, recommends that acceptable limits for PM23be lowered from 15µg/m 3 to as low as 12µg/m 3, which would cause the City of Alexandria to exceed the National Ambient Air Quality Standard.

Sullivan Environmental Consultants conclude that downwash is "screened to occur" at Marina Towers as often as 1200 hours per year (equivalent to 50 days).

Downwash results when an undiluted emission stream (plume) is directly impacted by nearby high-rise buildings.

Downwash causes the plume to hit the ground more quickly, which can prevent the normal dilution of pollutants, thereby increasing the exposure level and associated health effects.

Since no other surroundings sites have been evaluated, a more complete study is needed.

The Mirant power plant also emits 29 Tons per year of fly ash (primary particulate matter) directly into the neighborhood because the ash house silos fail to capture them.

The issue of proximity and health impacts to contiguous populations is paramount, and needs to be central in Council deliberations. In conclusion, we ask that the City Council, strongly focus on ensuring a healthy environment by demanding that the plant either install Maximum Achievable Control Technology, convert to natural gas or shut down in a two year time frame.

Thank you for your consideration in this matter.

Sincerely,

Elizabeth Chimento 1200 North Pist Street Alexandria VA. 22314

Poul Hertel 1217 Michigan Court Alexandria VA 22314

Roger Wand, President NOTICe 501 Slaters Lane Alexandria VA, 22314 Lillian J. White, Co-President League of Women Voters of Alexandria 119 West Mason Avenue Alexandria VA, 22301

Elizabeth Chimento 1200 North Pitt Street Alexandria Va. 22314 tel. (703 548-7939) Poul Hertel 1217 Michigan Court Alexandria Va. 22314 ul. (703 684-5375)

06/1/2004

The purpose of this letter is to inform you of a continuing and dangerous problem in Old Town Alexandria, Virginia, related to the Mirant Potomac River Generating Station and to request your assistance. This is a summary of the history and background of our attempts to address and correct the problem:

Summary

The Potomac River Generating Plant is a 50-year-old coal fired power plant, located in the middle of a densely populated urban area in the North Old Town section of Alexandria. The plant has very short smoke stacks¹ (chimneys), which increases our concern that adequate plume dispersion actually occurs.

About three years ago, we and many other residents in the north end of Old Town Alexandria noticed an increasing amount of gray residue on our cars, windowsills and inside our houses. Because we live only 1 and 2 blocks respectively from the plant and because of the obvious increase in coal plant operations, we became worried.

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¹ Due to proximity to Ronald Reagan National Airport.

History

Working with the plant: On three occasions, we visited the plant, establishing a collaborative relationship, to determine the source of the residue. The plant later stated it would only control areas within the plant's property lines, nothing outside its gates.

Research: To find the source and content of the dust, we launched an empirical search, conferring with scientists, participating in an international coal conference, surveying pertinent scientific journals and requesting test samples be taken and analyzed by independent laboratories (Pennsylvania State University and the Virginia Department of Environmental Quality). These efforts culminated in the comprehensive report, "Mirant Power Plant Emissions and Health Effects," presented to the City of Alexandria in August 2003 (see http://homepage.mac.com/witte/report/).

Infractions and Violations:

The Virginia State DEQ issued a Notice of Violation to the plant for exceeding its NOX limit by over 100%.

The EPA also issued a Notice of Violation (1/22/04) for the NOX exceedence, making it a Federal violation as well.

The EPA cited the plant again in April 2002, for violating New Source Review (NSR).

These two simultaneous infractions, issued by the EPA, designated this plant as a High Priority Violator. However, the EPA did not officially give the plant the NOV for the "New Source Review" violation, claiming that it was using that violation as a negotiating tool to settle the NOX violation.

Further, the EPA categorized all Mirant plants as High Priority Global Violators since every Mirant plant in its fleet violated NSR.

Currently, these infractions are being negotiated in Richmond, Virginia with the Virginia State DEQ, the Environmental Protection Agency and the U.S. Department of Justice.

The Real Issues Are Being Ignored:

The Virginia DEQ is now in the process of negotiating with the plant a new permit in which the NOX emission level will remain the same (1019 Tons), although no trading will be permitted with this permit. However, the permit does not address the following:

Downwash Study: At the personal expense of a few neighbors, we obtained a Preliminary Downwash Study conducted by Sullivan Environmental Consultants, a respected firm in the profession. The Sullivan study concluded that downwash is occurring at a high-rise condominium building just north of the plant 14% of the time. Indications are that this undiluted pollution plume is hitting the upper floors of the building and is probably exceeding National Ambient Air Quality Standards (NAAQS). Since this study was preliminary and did not include other buildings near the plant, we have asked the City and the DEQ to obtain complete downwash testing.

Particulate Matter and Proximity: The main cause of adverse health effects is small 2.5 micron particles. Primary 2.5 particulates, unlike the gas-formed secondary particles, accumulate closer to the plant, affecting nearby populations. However, this issue of proximity and health impacts to contiguous populations is dismissed.

Small particulates, measuring less than one seventh the diameter of a human hair strand, threaten health because they are breathed directly into the lungs, embedding themselves within and cannot be aspirated by sneezing or coughing. Inside the lungs, the 2.5 particles then inflame the surrounding tissue, resulting in irreversible heart and lung damage (see Health Effects section of the Chimento/Hertel Report page 9). Furthermore, recent scientific articles, clearly and unequivocally, demonstrate that coal-fired power plant emissions of particulate matter, specifically the small 2.5 micron particles, are especially dangerous to public health, resulting in asthma attacks, emergency room hospital visits and cardiopulmonary irregularities which lead to premature deaths (see Levy and Pope Studies in report).

The laboratory tests conducted by Pennsylvania State University and the Virginia Department of Environmental Quality indicated that the gray residue found in the neighborhood consisted largely of post-combusted by-products (fly ash) and non-combusted coal dust, originating from the neighborhood Mirant Power Plant.

Jonathan Levy's² research established that primary 2.5 particle concentrations "peaked closer to the plant and decreased more rapidly with distance than for sulfates or nitrates". Therefore, proximity to the plant directly corresponded with higher levels of exposure to primary 2.5 particle pollution (see Chimento/Hertel Report pages 2-4).

² Jonathan Levy, Sc.D, Harvard School of Public Health's leading scientist in power plant/health issues, has conducted case studies on pollution and coal-fired power plants in Massachusetts, Illinois and, most recently, Washington, DC. In May 2002, he briefed the U.S. Senate Environment and Public Works Committee on "Health Impacts of Power Plants: Case Studies in Massachusetts, Illinois, and Washington D.C." (Sources, p. 6, "Health Impacts of Air Pollution from Washington DC Area Power Plants," Summary prepared by Jonathan Levy specifically for Clean Air Task Force, May 2002).

Fly Ash -- 29 Tons Escape Per Year From Ash House Silo: The inorganic residue that remains after pulverized coal is burned is known as 'coal combustion byproducts' (CCB). Fly Ash is the finely divided CCB collected by electrostatic precipitators after the combustion process. Subsequently, hammers hit the electrostatic precipitators to release the particulates. As the particulates fall, they are sifted into the ash house silo, which are essentially huge vacuum cleaners that use fabric filters (bags) to trap the particles. According to the Mirant plant's consultant study, 29 tons per year of particulates are not captured by the bags and escape directly into the atmosphere. With the addition of a second ash house silo, this number could be reduced by 50% (see Chimento/Hertel report page 14).

Plant Does Not Serve Alexandria: The plant does not provide electricity to Alexandria; we only get the adverse health effects.

The Plant Needs to be Cleaned Up: The Mirant Potomac River Station operates with outdated technology in a dense urban environment. Its short smoke stacks are causing downwash on at least one residential building situated in close proximity (300 feet).

New Source Review Violations: Once a plant has violated NSR, the law requires it to comply with current modern emission standards.

Dear Bill Euille,

The memo from the staff, For May 12 meeting, has reconfigured some key graphs from Dr. Levy's draft analysis "Analysis of Particulate Matter Impacts for the City of Alexandria, Virginia" presented to the Council. This change marginalizes and masks the effects of particulate matter from the Alexandria plant on this City, which are still considerable around the plant (see pages 9 and 10 of draft figures 3,4 and 5).

Memo of Staff Recommendations

(1) In memo

Comment:

There is no <u>exit strategy</u> in the City stated long-term goal to shut down the plant, i.e., we have no idea if the plant will ever leave. With no determined closure date, the short-term goals become senseless.

(2) In memo Says, "that the plant will operate in as a safe and clean manner as is both feasible and attainable"

Comment:

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Does not set any standards nor any appointed agent to determine these standards and regulate compliance.

(3) In memo:

Comment:

There is nothing proposed that cleans up the plant and protects citizens' health until an imaginary shut down date occurs.

(4) In memo:

Comment:

Nox is a regional, not a local issue. There is nothing in the proposal that addresses the local issue pertaining to Particulate Matter and Fugitive Fly ash from the Ash House silo.

¹ Fugitive fly ash handling is not addressed in the memo, only the unloading is:

The inorganic residue, that remains after pulverized coal is burned, is known as 'coal combustion byproducts' (CCB). Fly Ash is the finely divided CCB collected by electrostatic precipitators after the combustion process. Subsequently, hammers hit the electrostatic precipitators to release the particulates. As the particulates fall, they are sifted into the ash house silo, which are essentially huge vacuum cleaners that use fabric filters (bags) to trap the particles. According to the Mirant plant's consultant study, 29 tons per year of particulates are not captured by the bags and escape directly into the atmosphere. With the addition of a second ash house silo, this number could be reduced by 50%, see Chimento / Hertel report page 14.

f. Memo recommends DEQ to undertake studies.

Comment:

This is the Downwash issue (see Sullivan Environmental Consultants' Preliminary

Reviewing the DEQ history (see August 12, 2003 memo attached), we question the DEQ's ability to maintain scientific objectivity. As stated in the DEQ memo, a choice was made to close the case even though their own staff stated emphatically "we stand by our original findings" that over 50 % of the residue came from the coal plant. We recommend that an uninvolved entity do the modeling and/or monitoring.

Discussion in memo, page 3

Fugitive and Coal Dust

The memo talks about installing "best available control technologies" for some ground issues. This is not an appropriate term in this context. BACT normally refers to pollution controls on stacks (see footnote 1 for ash house silo problem).

Small Particulate Matter

Particulate matter is the fundamental issue with this plant, yet this memo minimizes and marginalizes the effects of the Alexandria plant on its residents and surrounding areas. It does not address the positive quantifiable health effects that could be obtained by looking at particulate matter emissions from the stacks.

According to Dr. Levy2;

"Since we adopt a health perspective in this analysis and most epidemiological evidence points toward particulate matter as a stronger causal agent for mortality and morbidity than gaseous SO2 or Nox, we focus exclusively on primary and secondary particulate matter concentrations in this report and do not address the primary gaseous pollutants or ozone."

Furthermore, Dr. Levy concludes "that individuals who live closer to a power plant are more impacted by that plant than individuals living further away, but local populations contribute a relatively small fraction of aggregate risk."3

Finally, Science is unable to establish a lower threshold at which no health effects of PM_{2.5} are found.

Elizabeth Chimento and Poul Hertel

² Levy et al, Atmospheric Environment 36 (2002) page 1067

³ Dr. Levy web site, Statement of Jonathan Levy, Harvard School Public Health (US Senate Public Hearing May 2002)



MOUNT VERNON GROUP



ENVIRONMENTAL CO.

ALEXANDRIA, ARLINGTON COUNTY, FAIRFAX COUNTY, FALLS CHURCH, AND PRINCE WILLIAM

May 24, 2004

Dear Mayor and Members of the City Council:

Please find enclosed Sierra Club Mount Vernon Group's comments to the memorandum dated May 10, 2004, from City Manager Philip Sunderland to the Honorable Mayor and members of the City Council, regarding the Mirant Potomac River Power Plant.

Item (1) recommends that the Mirant Power Plant operations cease and Plant facilities be removed. This is a commendable position, but we request that the City take the additional step of establishing a time frame for this action. We do not support continued operations at the plant beyond CY2005. Separately, we would like to know if the City is prepared to consider additional, perhaps legal action on behalf of City residents should the Mirant Plant remain open beyond a stated time frame.

With respect to the conditions that should be considered while the plant remains in operation, we request that you consider the following:

- The problem of fine particulate matter (PM2.5) emitted from the stacks must be addressed through measurable steps by the plant operators. The 2002 Levy study indicates that 59 premature deaths, 66 hospitalizations, and 4,600 asthma attacks per year are caused by particulate emissions from the Mirant power plant. In addition, the Washington metropolitan area, including Alexandria is close to exceeding the National Ambient Air Quality Standard (NAAQS) for PM2.5. As stated in the recent Levy Study, the amount of concentration reduction in particulate matter through the control of power plants is reasonably high, when compared to other plausible emission control strategies.
- We recommend that the Virginia Department of Environmental Quality (DEQ) or another qualified independent party, not Mirant, should undertake a downwash modeling study to determine the impact of emissions from the plant on the local neighborhood, including nearby high rise buildings. This study should include not only NO_x but fine particulate matter (PM2.5).

Separately, we support the City Manager's recommendation that the DEQ permitting process should not allow Mirant to trade or purchase pollution credits. We have previously submitted comments to DEQ that its operating permit should hold Mirant accountable for the damage it is doing to the air we breathe by requiring them to use today's technology to protect our health and safety.

Thank you for your attention to this vital matter.

Sincerely,

Patricia Soriano

Group Chair

Ana Prados

Group Conservation Chair

prados @ earthling.net

ONE EARTH, ON: "ANCE

EXHIBIT	NO.	

MEMORANDUM

TO:

THE HONORABLE MAYOR AND

MEMBERS OF CITY COUNCIL

FROM:

IGNACIO B. PESSOA CITY ATTORNEY

DATE:

JUNE 18, 2004

SUBJECT:

ENFORCEMENT ACTIONS - MIRANT POTOMAC RIVER GENERATING

STATION

ISSUE: Consideration of enforcement actions against the Mirant Potomac River Generating Station.

RECOMMENDATION: That the City initiate the following enforcement and other actions against the Mirant Potomac River Generating Station:

- Revoking Special Use Permit No. 2296, granted in 1989, which approved the 1. construction and use of 18,000 square feet of new administrative offices, laboratories, conference, training and other space at the Mirant Potomac River Generating Station.
- Revoking Special use Permit No. 2297, granted in 1989, which approved the 2. Transportation Management Plan required for the lawful operation of the Generating Station.
- Revoking the noncomplying use status of the Generating Station, which was 3. granted as part of the 1992 rezoning.
- Instituting a Clean Air Act lawsuit seeking imposition of the statutory civil 4. penalties for the Generating Station's NOx permit violations, and an injunction against further violations.
- Objecting, in the pending Mirant Bankruptcy proceeding, to any reorganization 5. plan that includes the continued operation of the Generating Station.

DISCUSSION: On May 12, 2004 City Council requested that I provide additional information regarding the options available to the City to respond to the alleged Mirant NOx permit violations at the Potomac River Generating Station, as well as to the continuing emission of fugitive dust, particulate matter, toxic metals and acid gases from this power plant. See Attachment 1. Because of the significant impact of federal and state environmental regulations on the City's own zoning and other regulatory authority, I retained outside counsel with environmental law expertise to review the relevant legal issues. Neil Proto, John Britton and Steve Johnson, of Schnader, Harrison, Segal and Lewis, LLP, have outlined several courses of action for the City's consideration. See Attachment 2.

In summary, the five actions listed above are ripe for initiation should the Council determine that enforcement action is appropriate at this time. Other identified options will require additional investigation and research, as discussed below.

- 1 and 2. Special use permits are revocable for "failure to comply with any law," Zoning Ordinance § 11-506(A), and this would include legislative acts, such as state and federal environmental laws, which protect, as does the Zoning Ordinance, against public health risks to residents and others proximate to a regulated use. Thus, revocation of these special use permits would be justified based upon substantiated NOx permit violations, as well as other environmental violations, such as the plant's June 10, 2004, discharge into the waters of the Potomac, which resulted in a 500 square foot oil slick. Revocation would prohibit, as a violation of the Zoning Ordinance, the continued use of the designated administrative and related office space, as well as the operation of the entire plant without a valid Transportation Management Plan. Given the nature of the plant's public utility function, and the limited scope of these special use permits, it would be unrealistic to expect that revocation could lead to the immediate closure of the plant. Upon revocation the plant would be categorized as an illegal use, and no City permits for construction or upgrades could be approved. However, the operator could seek to cure the illegal status of the use by seeking from City Council new special use permits, subject to appropriate and reasonable new conditions. Under current practice, any such new SUPs would apply to and regulate the entire plant, including the five power generating units. Revocation of a special use permit requires notice to the affected operator, and a hearing before the Planning Commission and City Council. Council may initiate the revocation process by directing staff to docket the SUPs for public hearing in September.
- 3. Noncomplying use status is a benefit or privilege conferred by Council in 1992, upon the adoption of the new Zoning Ordinance, and, inter alia, allows uses such as the plant, which now require, but have never obtained, special use permit approval, to continue in existence indefinitely, and to be repaired, modernized and reconstructed. However, since 1992, several types of noncomplying uses have had their noncomplying status revoked, where Council has determined that the prolonged operation of such uses would have an adverse impact on the community. Revocation results in the categorization of such uses as nonconforming uses, and thus requires termination of the use within 7 years, or within such longer period as an individual operator demonstrates to Council would be reasonable given the operator's legitimate investment in the affected business. In the interim, financial investment to prolong the useful life of the business is severely restricted. Where, as here, the zone in which the existing use is located permits the use by special use permit, the operator has the additional avenue of seeking to obtain such a permit, with such newly imposed conditions as Council deems appropriate, and thus to remove the onus of nonconforming status. The information presently available as to the adverse impacts from the Mirant plant supports revocation at this time of the preferential noncomplying use status afforded power plants in 1992. The Zoning Ordinance provisions applicable to nonconforming uses establish a mechanism for determining at a future time the appropriate abatement period for this particular plant, based upon additional information as to the owner's investment in the plant, and the extent of any health risks caused by the plant's continued operation. Revocation of noncomplying use status requires an amendment to the Zoning Ordinance text. In order to move forward with such a change, Council should adopt the attached

resolution to initiate the process for amending the Zoning Ordinance. See Attachment 3.

- 4. Under the Clean Air Act, Mirant's alleged violation of the Potomac River Generating Station's NOx permit is punishable by a civil penalty of up to \$25,000 for each day of violation. As discussed in the Schnader Memorandum, page 6, the City can, after giving notice to Mirant, EPA and VDEQ (and provided that Mirant and VDEQ have not settled the state's pending administrative enforcement action), file suit seeking the imposition of such penalties, and to enjoin further Clean Air Act violations. Any penalties assessed by the court would be paid to the federal government, and the pending Mirant Bankruptcy would not stay the assessment or collection of any such judgment. The Clean Air Act provides for an award of litigation costs, including attorney's fees and expert witness fees, to a successful plaintiff. If requested by Council on June 22, we can proceed to give the required notice in order to initiate this process.
- 5. Mirant has pending in the U.S. Bankruptcy Court in Texas a Chapter 11 proceeding, which seeks the court's approval of a reorganization plan for the corporation. The City has the right to object to approval of any plan which includes the continued operation of the Potomac River Generating Station, although the basis for such an objection should be grounded in the likely adverse economic impact on the debtor corporation and its ability to satisfy its creditors, which might be attributed to the continued operation of the plant. If requested by Council on June 22, we can proceed to prepare and file the appropriate objections.

Finally, the Schnader Memorandum identifies several additional actions which the City could undertake, in particular the adoption of an ordinance defining certain operational characteristics of the plant as a public nuisance, or bringing suit to seek a judicial declaration of public nuisance, and directing the prompt abatement thereof. The information necessary to form a decision as to the expediency of such actions is currently lacking. If Council wishes to pursue further consideration of such actions, the City would need to design and conduct qualitative and quantitative modeling of, and monitoring for, the various hazardous substances known to be emitted by coal fired power plants, followed by an assessment of the risks posed to persons shown to have been exposed to such plant emissions at the established concentrations.

Depending on the information developed, abatement might take the form of plant closure, or of retrofitting additional, feasible pollution control measures. Outside counsel and I would be pleased to assist City staff in designing the requisite studies.

I will, of course, be available to answer any questions on June 22, 2004, either during the public meeting or in closed executive session.

Attachment 1 BREDL Information Sheet, Potomac River Generating Station Attachment 2 Schnader Memorandum Attachment 3 Resolution

C:\ORDINANCES 2004\06 June 04\IPB MIRANT MEMO.wpd

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BLUE RIDGE ENVIRONMENTAL DEFENSE LEAGUE

Linergy 2

Coal-fired Power Plants



Mirant (Southern Energy) - Potomac River

Mirant - Potomac River Generating Station 1400 N. Royal St. Alexandria, VA 22314 Alexandria City

Uncontrolled for NOx and SO2 emissions.

Units -Year of operation

(Power)

Unit 1 - 1949 (88 Mw)

Unit 2 - 1950 (88 Mw)

Unit 3 - 1954 (102 Mw)

Unit 4 - 1956 (102 Mw)

Unit 5 - 1957 (102 Mw)

- source: DOE

Average NOx Rate (lb/mmBtu)

- source: EPA data

Year	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5
2002	0.38	0.42	0.42	0.42	0.40
2001	0.41	0.42	0.41	0.42	0.41
2000	0.43	0.42	0.41	0.44	0.42
1999	0.42	0.37	0.44	0.43	0.43
1998	0.42	0.39	0.43	0.40	0.44
1997	0.42	0.39	0.44	0.42	0.45
1996	0.67	1.51	0.60	0.53	0.70
1995	0.56	0.54	0.67	0.47	0.68

Nitrous Oxide, Sulfur Dioxide, and Carbon Dioxide emissions

tons per year - source: EPA data



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Year	NOx	SO2	CO2
2002	6,010	16,142	2,893,282
2001	5,918	15,162	2,811,631
2000	5,694	13,948	2,679,520
1999	6,893	17,627	3,293,466
1998	5,921	15,026	2,787,156
1997	5,002	11,816	2,352,788
1996	5,597	10,589	2,001,906
1995	18,353	12,541	1,567,924

pounds released in 2001 - source: EPA TRI

Chemical	Air	Land	Water	Total On-Site Releases
Barium compounds	833		205	1,038
Chromium compounds	249		16	265
Copper compounds	187		2,256	2,443
Hydrochloric acid	2,463,326			2,463,326
Hydrogen fluoride	90,212			90,212
Lead compounds	183		13	196
Manganese compounds	298		172	470
Mercury compounds	68		0	68
Nickel compounds	238		16	254
Polycyclic aromatic compounds	0			0
Sulfuric acid	91,500			91,500
Vanadium compounds	335	AN ACCOUNT OF A CONTRACT MANAGEMENT	31	366
Zinc compounds	551		85	636
TOTAL	2,647,979		2,794	2,650,774

grams released in 2001 - source: EPA TRI

Chemical	Air	Land	Water	Total On-Site Releases
Dioxin & Dioxin-like compounds	0.1807000			0.1807000

55

pounds released in 2000 - source: EPA TRI

Chemical	Air	Land	Water	Total On-Site Releases
Barium compounds	1,000		250	1,250
Hydrochloric acid	2,400,000			2,400,000
Hydrogen fluoride	110,000			110,000
Mercury compounds	150		0	150
Polycyclic aromatic compounds	0			0
Sulfuric acid	130,000			130,000
Vanadium compounds	255		250	505
TOTAL	2,641,405		500	2,641,905

grams released in 2000 - source: EPA TRI

Chemical	Air	Land	Water	Total On-Site Releases
 Dioxin & Dioxin-like compounds	0.7300000			0.7300000

For information, including health impacts, on chemicals listed, please check out these resources:

U.S. Library of Medicine: TOXNET - http://toxnet.nlm.nih.gov/

Agency For Toxic Substances And Disease Registry: Toxicological Profiles - http://www.atsdr.cdc.gov/toxprofiles/

Back to Virginia map

updated Sept. 2003

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2001 FENNSYLVANIA AVENUE, NW SUITE 300
WASHINGTON, DC 20006-1825
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MEMORANDUM

June 18, 2004

MIRANT POTOMAC RIVER POWER PLANT RECOMMENDED LEGAL ACTIONS WORTHY OF FURTHER REVIEW

Submitted by

SCHNADER HARRISON SEGAL & LEWIS LLP WASHINGTON, D.C.

Neil Thomas Proto John B. Britton Steven R. Johnson

INTRODUCTION

We understand that the City of Alexandria's long-term goal is to support the cessation of the Mirant Corporation's ("Mirant") Potomac River Power Plant ("Mirant Plant") and develop the site for a use that is compatible with the City's Master Plan and the adjacent and nearby residential communities.

The Mayor and Council previously identified four categories of action to achieve the City's goal: (i) the purchase, or acquisition through eminent domain, of the Mirant Plant site; (ii) state legislation; (iii) zoning and land use regulatory changes; and (iv) litigation. This Memorandum identifies reasonable legal actions within these categories. In the event the Mayor and Council determine to pursue one or more of these actions, additional research is necessary to identify more fully the legal implications and viability of each action.

Three considerations warrant clarification at the outset:

1. The Need to Declare a Substantiated Position. The City has no formally declared position, reflected in law, with respect to its goal for the Mirant Plant. Put differently, it has not yet established the reasoned basis for pursuing its goal. The City should authorize a full analysis of (i) the health, traffic and pedestrian safety, noise and aesthetic effects of the plant and its operations, (ii) the economic value of the property, and, for the reasons alluded to below, (iii) the possible "public purpose" or "public uses" for which the site could be used. It also should be mindful of the value (and perhaps necessity) of understanding, with precision, Mirant's electric

Schnader Harrison Segal & Lewis LLP NEW YORK PENNSYLVANIA CALIFOR⁴¹ A WASHINGTON, DC NEW JERSEY

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generating duty under federal and state law and how such duty can be met if the Mirant Plant ceased operating.

- 2. Mirant is affected with a "Public Interest." Mirant generates electricity for public use; its duty is tempered with a "public interest." In fulfilling that duty, it is subject to the substantial regulatory authority of the Federal Energy Regulatory Commission ("FERC").
- 3. Mirant is in Bankruptcy. On July 14, 2003, Mirant filed voluntary petitions in the United States Bankruptcy Court for the Northern District of Texas, Fort Worth Division for relief under Chapter 11 of the United States Bankruptcy Code. At a recent public hearing on its proposed new operating permit, a Mirant spokesperson stated that additional emission controls could force the plant to be closed permanently. Statement of Deborah Jennings (Mirant), Mirant Operating Permit Challenged, The Connection, April 14, 2004. Mirant continues its operation of the plant as a debtor-in-possession pursuant to the Code. Its financial position and ability to operate (as a utility, corporate citizen and neighbor) may be at its weakest since acquiring the plant.

Typically, the bankruptcy process imposes an automatic stay that operates to prevent the commencement of a judicial, administrative or other action against the debtor. 11 U.S.C. § 362(a)(1). The stay also operates to prevent any act to obtain possession of or exercise control over the property of the estate in bankruptcy. 11 U.S.C. § 362(a)(3). The statute exempts, however, actions by a governmental unit in the exercise of its traditional police or regulatory power. 11 U.S.C. 362(b)(4); See In re PMI-DVW Real Estate Holdings, L.L.P., 240 B.R. 24, 30 (Bankr. D. Ariz. 1999). Changes in the zoning laws are among those traditional actions that are exempt. In re Beker Indus. Corp., 57 B.R. 611, 631 (Bankr. S.D.N.Y. 1986) ("Zoning and land use planning are exemplary of police and regulatory powers."); In re Lacoquille Inv. Co., 44 B.R. 731, 732-33 (Bankr. S.D. Fla. 1984) (enactment of ordinance prohibiting residential use of property was excepted from stay even though it affected debtor's intended use of the property as a condominium). Thus, without acquiescing in or conforming to any process in the Bankruptcy Court, the City may exercise its traditional police and regulatory jurisdiction over matters related to Mirant, including as a public nuisance and through other common law actions.

With these three considerations in mind, we recommend, preliminarily, the following legal actions for further review.

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¹ In <u>State v. Mirant New York, Inc.</u>, 300 B.R. 174, 179 (S.D.N.Y. 2003), plaintiff sued for violations of the Clean Air Act and, under the common law, an action for public nuisance. Without specific discussion of the nuisance claim, the court held that the State commenced its action to protect the health and safety of its citizens and, therefore, was exempt from the bankruptcy stay. <u>See also In re Porter</u>, 42 B.R. 61 (Bankr. S.D. Tex. 1984) (court found that public nuisance claim fell under the Section 362(b)(4) exception).

LEGAL ACTIONS

1. PURCHASE (or the Exercise of Eminent Domain). The simplest strategy for obtaining the closure of the Mirant Plant is for the City to purchase it from Mirant in an armslength transaction and then sell it to a different user or shut it down. Section 13.01 of the City Charter grants the City the power to purchase lands, buildings and other structures. The City must obtain an independent valuation of the property. In this same context, Mirant is apparently attempting to have the assessed value of its power plants (including in Alexandria) decreased to more accurately reflect the steep decline in the energy market. Comment by Steven Arabia (Mirant), Bankrupt Utility Strains Budgets, Washington Post, May 9, 2004, at C-1.

Because "purchase" does not fall within the traditional police and regulatory jurisdiction of the City, the purchase of Mirant property would require Bankruptcy Court approval. It also will implicate Mirant's duty to provide electricity. ²

Alternatively, the City could acquire the Mirant Plant through the exercise of the power of eminent domain. Sec. 13.02 of the Charter grants the City the power to "acquire by condemnation proceedings lands, buildings, structures and personal property or any interest, right, easement or estate therein of any person or corporation, whenever in the opinion of the council a public necessity exists therefore, which shall be expressed in the resolution or ordinance directing such acquisition." Sec 2.03(n) also grants the City the power to specifically "acquire, by purchase, condemnation, lease or otherwise . . . electric plants." An exercise of authority under Sec. 2.03(n) requires the City to use the plant for the public welfare. Light v. City of Danville, 190 S.E. 276, 278 (Va. 1937). Under any circumstance, the City would first have to make a good faith effort to purchase the property. Va. Code Ann. § 25.1-204.

Prior to directing any condemnation proceeding, the Council would be required to adopt a resolution or ordinance identifying and approving the public use and purpose to which the property will be put and the necessity for its acquisition. Va. Code Ann. § 15.2-1903. These public uses could include, among others, establishing a riverfront park, a greenway, a flood protection system or improvements in the City's transportation network, as well as private uses serving a public purpose.

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² The City must be mindful that Mirant has an obligation to provide electricity and otherwise comply with its "public interest" duty under the FERC regulatory scheme. See 16 U.S.C. § 824b(a).

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2. **LEGISLATION**. There are restrictions imposed on Council action by the State Air Pollution Control Law ("Control Law"), Va. Code Ann. §§ 10.1-1300 et seq. The Control Law preempts local ordinances related to air pollution. Va. Code Ann. § 10.1-1321.B. ³

In adopting an ordinance or amending an existing ordinance relating to air pollution, a municipality first must obtain approval from the Air Pollution Control Board ("Board"). <u>Id</u>. The Board will not approve any proposed ordinance or modification that attempts to regulate any emission source that is required to register with the Board or to obtain a Department of Environmental Quality ("DEQ") permit. <u>Id</u>. Thus, there is no legislative recourse for the City in its own ordinances to control or limit emissions from the Mirant plant.

The City may avoid this legislative preemption with an ordinance that, sensitive to Constitutional equal protection issues, identifies the Mirant Plant emissions and activities as a public nuisance. Such an ordinance would have to be unambiguous and set out in a precise manner the adverse impact to the public's health and welfare. The ordinance also would serve as a rationale on which to base future City actions such as rezoning or a common law nuisance action.

3. ZONING & REGULATORY LAND USE CHANGES. The land on which the Mirant Plant is located is zoned UT: Utilities and Transportation (enacted as part of the City's comprehensive rezoning in June 1992). The Mirant Plant currently operates as a noncomplying use pursuant to Zoning Ordinance § 12-300 and under a limited special use permit covering certain administrative offices. The Mirant Plant and accessory uses, including the railroad and railroad tracks, comprise all the uses in this particular UT zone. There are a number of UT zones throughout the city. Property surrounding the Mirant Plant is zoned predominantly for residential uses.

The following legal actions are available and worthy of further exploration:

Revocation of Special Use Permit. Pursuant to Zoning Ordinance § 11-506, the Council may, after notice and a public hearing, "revoke or suspend any special use permit approved by it upon proof that the holder of the permit failed to comply with <u>any law</u>, including, without limitation, the conditions subject to which the special use permit was granted." (Emphasis added.) To the extent a part of the site is subject to special use permission, this provision would permit the City to revoke the special use permit on the basis that Mirant has "failed to comply" with, for example, the NO_x limits in its air permit, a violation of the Air Pollution Prevention and Control Act ("Clean Air Act"), 42 U.S.C. §§ 7401 et seq. Depending upon the conditions and limitations included within the special use permit, there may be other grounds for revoking it.

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The Air Pollution Prevention and Control Act ("Clean Air Act") does not preempt State or local action provided such action does not fall below the minimum standards set out in the Act. 42 U.S.C. § 7416. The City is subject, however, to any limitation on its jurisdiction and powers, such as the Control Law, imposed by the Commonwealth of Virginia. Thus, the City should continue to work with its state delegation for legislation in the General Assembly related to the Mirant Plant. (See e.g., House Bill No. 113 submitted by the Hon. Mary Van Landingham, January 14, 2004.)

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■ Zoning Ordinance Amendment. Pursuant to its zoning authority, the Council could amend applicable zoning ordinances to make "electric power generation" on the property a prohibited use. Alternatives for accomplishing this include: (i) removing "electric power generating plant" from the list of uses permitted by special use permit in the UT zone; (ii) amending the zone to residential or other zone categories more compatible with a residential zone's purpose; (iii) establishing an "overlay zone" on waterfront property including the Mirant property that would prohibit uses such as electric power generating plants; and (iv) amending the UT zone to restrict industrial facilities within 1000 feet of residential properties.

Each alternative raises different legal issues. A zoning ordinance amendment directed solely at Mirant would likely require the City to meet a higher evidentiary burden (once it is challenged) of demonstrating that the zoning change is reasonable. See Board of Supervisors v. Snell Constr. Corp., 202 S.E.2d 889, 893 (Va. 1974). One reasonable basis may be a change in circumstance substantially affecting the public health, safety or welfare since enactment of the prior zoning. Id. An increase in residential uses proximate to the Mirant Plant and new medical research revealing the risk of adverse health effects from, among other things NO_x and PM _{2.5}, may provide the changed circumstances and reasonable basis.

A more comprehensive rezoning (not directed exclusively at Mirant) would be accorded substantial deference in a judicial setting. For example, a "Waterfront Overlay District" could be established (all properties within a logical segment of the Alexandria waterfront) that imposes additional restrictions that effectively prohibit electric power generating plants. Similarly, removing "electric power generating plants" as a use permitted by special use permit from all UT zones, or amending the UT zone to prohibit industrial facilities within 1000 feet of a residential building, also would be comprehensive rezoning (potentially involving, however, hard policy questions beyond the fate of the Mirant Plant).

An amendment that eliminated "electric power plants" as a permitted use would not lead to the immediate closure of the Mirant Plant. Consistent with Va. Code Ann. § 15.2-2307 which prohibits the "impairment of any vested right" in connection with zoning actions, Zoning Ordinance § 12-202 provides that "any nonconforming use, lawfully existing at the time of the passage of a zoning ordinance, may be continued as such subject to the provisions of Zoning Ordinance § 12-200, it being the intent of the city to provide for the eventual elimination of all nonconforming uses." Consequently, following any such amendment, the Mirant Plant would continue to operate as a nonconforming use. Its operation would be subject, however, to important restrictions related to its authority to rebuild after damage, or to change, extend or enlarge the plant or its use. See Zoning Ordinance §§ 12-203-12-208. These restrictions could make long-term investments in the facility, including, for example, upgraded emission control equipment that may be required, less economically attractive or even permissible.

In addition, the Council also could amend Zoning Ordinance § 12-200 to limit the duration within which the nonconforming use may continue. The Charter authorizes the Council to require nonconforming buildings, structures and uses to "conform to the regulations and restrictions prescribed for the zone or zones in which they are situated, in any event within a reasonable period of time to be specified in the ordinance." Zoning Ordinance § 9-09(g). See also City Council of Alexandria v. Lindsey Trusts, 520 S.E.2d 181, 183 (Va. 1999) (city had the power to treat restaurants as nonconforming uses and could have "required the termination of

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their operation after a reasonable period of time under the powers given it by § 9.09(g) of its charter.")

In a residential zone, a nonconforming commercial or industrial use must be terminated within 40 years. Zoning Ordinance § 12-210(a). Zoning Ordinance § 12-214 provides a general seven-year limitation on nonconforming uses that could apply to the Mirant Plant. In any event, the City could establish a specific time limitation applicable to particular uses (e.g., electric generating plants) as long as it is "reasonable." This term is not defined in the Charter, ordinances or in State law. In this context, the relevant consideration would be to what extent the limitation affected the property owner's investment-backed expectations in the property. See e.g. Penn Cent. Transp. Co. v. New York City, 438 U.S. 104, 124 (1978) (relevant to "regulatory takings" analysis is "the extent to which the regulation has interfered with distinct investment-backed expectations"). A specific economic analysis would be necessary, with these factors, among others being examined: (i) The plant has been operating in excess of 40 years; its investment-backed expectation in the use has been fully realized; and, (ii) Mirant's more recent investment in the plant could very well reveal its investment expectations are relatively modest in duration.

- Change in Status. The City could change, through a text amendment, the current status of the Mirant Plant from noncomplying to nonconforming. This would invoke the seven-year limitation period or allow the City to determine a more appropriate limitation period consistent with the amortization requirement. Any limitation period would be subject to a "reasonableness" test. In light of the unequivocal violations of the Mirant Plant's operating permits, the evidentiary burden to support a change in status under this mechanism may be less stringent than that associated with a rezoning directed to the Mirant Plant.
- 4. LITIGATION. We have examined, and recommend for further review, two possible forms of litigation (under the Clean Air Act, and various public nuisance theories) available to the City. We also identify, in preliminary terms, the possibility of the City "participating" in the pending Bankruptcy proceeding.
- Clean Air Act Enforcement. The Clean Air Act provides that any person, including local government entities, may commence a civil action ("citizen suit") against any other person (including Federal and State regulatory agencies) alleged to have violated (if there is evidence that the alleged violation has been repeated) an emission standard or that is in violation of any condition of a permit. 42 U.S.C. § 7604(a). The City may invoke this provision of the Clean Air Act to seek strict enforcement of Mirant's permit limits and the imposition of civil penalties for violations of any limits or other requirements. The City would file such an action in the United States District Court for the Eastern District of Virginia. The Clean Air Act also requires the City to provide a 60-day notice to Mirant, the United States Environmental Protection Agency ("EPA") and the DEQ, of its intent to sue. 42 U.S.C. § 7604(b). Such a lawsuit is susceptible to preemption, however, if either the EPA or the DEQ is "diligently prosecuting" a civil action on the same matter. Id. Short of EPA's and DEQ's intervention (which may occur), the City can pursue such an action provided it can show violations of permit limits or any other permit requirements.
- Criminal Prosecution (Clean Air Act). The Clean Air Act also imposes criminal penalties on any person who, knowingly violates any requirement or prohibition of a permit, 42 U.S.C. § 7413(c)(1), or negligently or knowingly releases any hazardous air pollutant (as set out

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in section 112 of the Act) and places another person in imminent danger of death or serious bodily injury. 42 U.S.C. § 7413(c)(4) and (5). Such offenses are subject to prosecution—by the United States—in federal court under Title 18 of the United States Code. Offenses are punishable by both fines and imprisonment. If it proceeds with a citizen suit, the City may uncover or adduce evidence of wrongdoing by Mirant, or by an individual employee of Mirant, that warrants a formal petition to the Department of Justice (or through the United States Attorney) seeking a criminal prosecution.

Nuisance. Generally, the historic police powers of the State and its political jurisdictions are not superseded by a federal statute unless it is the clear and manifest purpose of Congress to do so. Medtronic, Inc. v. Lohr, 518 U.S. 470, 485 (1996). Furthermore, there is a presumption in favor of the exercise of traditional police powers. Huron Portland Cement Co. v. City of Detroit, 362 U.S. 440, 442 (1960). The Clean Air Act does not restrict any right that the City may have under any other statute or the common law to seek enforcement of an emission standard or limitation "or to seek any other relief". 42 U.S.C. § 7604 (e). Thus, in addition to an action under the Clean Air Act, the City may pursue other litigation remedies under its traditional police power and regulatory jurisdiction against Mirant or any of its individual employees.⁴

"The common law of Virginia recognizes public nuisance as an offense." Nat.1 Org. for Woman v. Operation Rescue, 726 F. Supp. 1483, 1495 (E.D. Va. 1989) (citing Tisdale v. Virginia, 77 S.E. 482 (Va. 1913)). Public nuisance, generally, is a class of wrongs arising out of the unreasonable, unwarrantable or unlawful use by a person of his own property that produces material annoyance, inconvenience, discomfort or harm. Remedies include actions for damages, suits in equity and summary abatements. Injury can include effect on the safety, health or morals of the public, or working a substantial annoyance, inconvenience or injury to the public in general. United States v. County Bd. of Arlington Cty, 487 F. Supp. 137, 143 (E.D. Va. 1979). Noise, traffic, nauseous smells and violations of zoning restrictions also may rise to the level of a nuisance. Jordan v. Virginia, 549 S.E. 2d 621, 623 (Va. Ct. App. 2001). Whether a particular use constitutes nuisance depends on whether the use is reasonable under the circumstances including consideration of: (i) locality and character of the surroundings; (ii) present use and trends of surrounding property; (iii) nature of use; (iv) utility and social value of use; (v) the enjoyment invaded or disrupted and the nature and extent of the harm; and (vi) frequency of harm and its effect on enjoyment of life, health and property.

State statute provides that any locality may maintain an action to compel a responsible party to abate, raze or remove a public nuisance. Va. Code Ann. § 15.2-900. The statute generally defines nuisance to include "dangerous or unhealthy substances which have escaped, spilled, been released or which have been allowed to accumulate in or on any place" Id. The City's Code also makes it unlawful for any person "to keep or permit upon improved or unimproved real estate within the city any thing or things. . . which are dangerous, unhealthy or

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⁴ The Supreme Court recently addressed the issue of preemption under the Clean Air Act. <u>See Engine Mfrs. Assoc. v. South Coast Air Quality Mgmt. Dist.</u>, 124 S. Ct. 1756 (2004). In upholding federal preemption, the Court focused only on section 209 of the Clean Air Act which restricts State and local action with respect to standards and enforcement of emissions controls for new motor vehicles. Section 209 does not apply to stationery sources such as the Mirant Plant. 42 U.S.C. § 7543 (a).



offensive so as to cause or be likely to cause injury or annoyance to any resident or citizen of the city." City Code § 13-1-27.

Due to the constraints imposed by the Bankruptcy proceeding, any action for nuisance can only request injunctive relief. To obtain such relief, the City will have to meet the substantial burden in the court's "comparative injury" analysis; that is, the balancing of the equities as between the harm caused by the nuisance and the public interest in continuing the operation of the Mirant Plant. Although the operation of the Mirant Plant pursuant to statutory authority is not a per se defense to a suit in nuisance, it is an "important" factor in the court's analysis. Put differently, the City needs to have solidly in place, the factual basis and analysis to substantiate its claim and to meet its evidentiary burden.

The City also may support its citizens in their pursuit of private nuisance actions against Mirant. A private nuisance action could be available to those citizens located in the residentially zoned areas adjacent to and nearby the Mirant Plant, and particularly and adversely affected by its operation, including from the delivery and offloading of coal, the noise of the rail cars and the overall appearance of the site. See e.g., Townsend v. Norfolk R. & Light Co., 52 S.E. 970 (Va. 1906) (location and operation of power plant gave rise to liability). Such an action would not implicate the Air Pollution Control Law. In contrast to its legislative preemption, the Control Law does not preclude, limit or affect in any way the substantive and procedural rights of any person, including a municipality, to damages or other relief on account of injury to persons or property. Va. Code Ann. § 10.1-1320.

5. BANKRUPTCY PROCEEDINGS. As a creditor, the City has standing to present its views in the ongoing Bankruptcy process. The City is a "party in interest" with the right to object to the confirmation of any proposed reorganization plan. 11 U.S.C. § 1128. In such an objection, the City may submit its opposition to the continued operation of the Mirant Plant. The City also could petition the Bankruptcy Court to order the Bankruptcy Trustee to "abandon" the Mirant Plant as part of the bankruptcy estate thereby subjecting it to any pre-filing claims. 11 U.S.C. 554(b).

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RESOLUTION NO	
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WHEREAS, the Alexandria City Council may initiate the amendment of the Alexandria Zoning Ordinance whenever it determines that public necessity, convenience, general welfare or good zoning practice requires an amendment; and

WHEREAS, the provisions of the Zoning Ordinance which confer noncomplying use status on certain heavy industrial uses which have not obtained a special use permit as required under current law, and thus allow the operation, and adverse zoning impacts, of such uses without special use permit regulation to continue, are inadequate to protect the health, safety and welfare of the residents of Alexandria and other persons; and

WHEREAS, adequate protection of the public health, safety and general welfare through individualized special use permit review of such heavy industrial uses represents good zoning practice that is important to the public necessity and convenience and the general welfare;

NOW, THEREFORE, BE IT RESOLVED by the City Council of the City of Alexandria:

Section 1. That the public necessity, convenience, general welfare or good zoning practice requires consideration of a Text Amendment to revoke the noncomplying use status of certain heavy industrial uses which have not obtained a special use permit as required by current law, and categorize such uses as nonconforming uses.

Section 2. That the City Council does hereby initiate such Text Amendment, and refer the same to the Planning Commission for public hearing and consideration in the manner provided by law.

ADOPTED:		
ATTEST:	WILLIAM D. EUILLE	MAYOR
JACQUELINE M. HENDERSON, CN	AC, CITY CLERK	

ATTACHMENT 3

RESOLUTION NO. 2111

WHEREAS, the Alexandria City Council may initiate the amendment of the Alexandria Zoning Ordinance whenever it determines that public necessity, convenience, general welfare or good zoning practice requires an amendment; and

WHEREAS, the provisions of the Zoning Ordinance which confer noncomplying use status on certain heavy industrial uses which have not obtained a special use permit as required under current law, and thus allow the operation, and adverse zoning impacts, of such uses without special use permit regulation to continue, are inadequate to protect the health, safety and welfare of the residents of Alexandria and other persons; and

WHEREAS, adequate protection of the public health, safety and general welfare through individualized special use permit review of such heavy industrial uses represents good zoning practice that is important to the public necessity and convenience and the general welfare;

NOW, THEREFORE, BE IT RESOLVED by the City Council of the City of Alexandria:

Section 1. That the public necessity, convenience, general welfare or good zoning practice requires consideration of a Text Amendment to revoke the noncomplying use status of certain heavy industrial uses which have not obtained a special use permit as required by current law, and categorize such uses as nonconforming uses.

Section 2. That the City Council does hereby initiate such Text Amendment, and refer the same to the Planning Commission for public hearing and consideration in the manner provided by law.

ADOPTED: June 22, 2004

WILLIAM D. EUILLE

MAYOR

ATTEST:

Jacqueline M. Henderson, CMC Ci

City Clerk

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ENVIRONMENTAL CONCERNS REGARDING THE MIRANT POWER PLANT

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6-22-04

Alexandria Environmental Policy Commission Resolution **June 21, 2004**Approved 9-0

WHEREAS, the Mirant Power Plant was constructed in 1949 and has not undergone recent significant upgrades to improve air quality; and,

WHEREAS, the Mirant Power Plant is land use incompatible with surrounding residential neighborhoods and sensitive environmental receptors; and,

WHEREAS, a study commissioned by the City of Alexandria and prepared by Dr. Jonathan Levy of the Harvard School of Public Health concludes that the Mirant Power Plant is likely the single source that contributes most to particulate matter (PM_{2.5}) levels in Alexandria; and,

WHEREAS, according to Dr. Levy's study, the Mirant Power Plant is on of the highest contributors of PM_{2.5} per megawatt of power produced of any of the five power plants in the region evaluated in the study; and,

WHEREAS, Dr. Levy's study estimates that the Mirant Power Plant contributes to approximately 0.9 deaths, 0.7 cardiovascular hospital admissions, and 0.4 pediatric asthma emergency room visits in Alexandria per year; and,

WHEREAS, Dr. Levy's study concludes that reducing emissions from the Mirant Plant would provide the most health benefits to Alexandrians; and,

WHEREAS, the electricity needs of the region are currently dependent on the Mirant Power Plant making it a complicated regional decision to take the plant off line; and,

WHEREAS, the Environmental Policy Commission has heard from concerned citizens and the City of Alexandria staff on the impacts of the Mirant Power Plant; and

WHEREAS, in the City's limited authority to regulate the plant, it has made recommendations to the State to be incorporated into the permit issued to the Mirant Power Plant;

THEREFORE BE IT RESOLVED, that the Environmental Policy Commission recommends that the City's goal should be to close Mirant Power Plant; and,

BE IT FURTHER RESOLVED, that the Environmental Policy Commission specifically recommends that the City:

- Rezone the parcels of land currently occupied by the Mirant Power Plant consistent with the future uses that the City anticipates after the plant is closed;
- Work closely with elected State officials to create legislation that will hasten the closure of the Mirant Power Plant; and,
- Support efforts by the State to ensure that nearby citizens and the environment are protected to the maximum degree possible until the facility is closed.

BE IT FURTHER RESOLVED, that the Environmental Policy Commission commends the City for its proactive efforts to retain Dr. Levy to conduct a city-specific study of the plant and commends the efforts of Elizabeth Chimento and Poul Hourtel to represent the citizens living directly adjacent to the plant.

Kenyon A. Larsen

Chair, Environmental Policy Commission

6-22-04

Date

12-214 Abatement of nonconforming uses.

- (A) Promptly upon becoming aware of the existence of a nonconforming use, the director shall notify the property owner and, if different, the property operator of the nonconforming status of such use. The nonconforming use shall be discontinued on or before the expiration of a period of seven years from the date of such notice, unless, prior to the expiration of such period, a special use permit which authorizes the continuation of the nonconforming use has been approved, or the seven-year period has been extended by the city council, pursuant to the following:
 - (1) The owner or operator of the nonconforming use may apply for a special use permit to continue such use, pursuant to section 11-500 and this section 12-214.
 - (2) The granting of a special use permit under this section 12-214 shall constitute authority for the applicant and any other persons expressly authorized therein to continue the use beyond the expiration of the seven-year period, subject to such terms and conditions as council may provide in granting the special use permit; provided, that no such permit may authorize a change to a different nonconforming use than that which existed on the date of notification, or any increase in the size or intensity of the use greater than that which existed on the date of notification, or excuse compliance with the provisions of section 12-303.
 - (3) When an application for a special use permit under this section 12-214 is considered, the following criteria shall apply in addition to those set forth in section 11-504:
 - (a) the degree to which the use serves the nearby neighborhood; and
 - (b) the degree to which the use is compatible with the uses in the nearby neighborhood.
 - (4) In the case of a conflict between the general nonconforming use provisions of section 12-200, the more specific provisions of this section 12-214, or the terms and conditions of a special use permit granted under section 12-214(A), the special use permit shall prevail over the provisions of section 12-200 and section 12-214(B), and the provisions of section 12-214 shall prevail over those of section 12-200.
 - (5) No later than the expiration of the seven-year period established pursuant to this subsection, the owner or operator of a nonconforming use may seek from city council an extension of the date by which it must come into conformity with this section 12-214 by filing with the director a petition which sets forth in detail the reasons why a fair and reasonable return on the investment in such nonconforming use, made by the petitioner prior to

ATMERNEUT 2

the date of notification, cannot be obtained prior to the expiration of the seven-year period. Following a public hearing, council may extend the seven-year period only if it finds that a strict application of the expiration date will deny the petitioner the opportunity to realize a fair and reasonable return on the investment in the nonconforming use made by the petitioner prior to the date of notification, in which case council shall extend the expiration date by the minimum time which it determines will provide such opportunity to the petitioner.

- (B) Any nonconforming use existing on (May 16, 1998) shall comply with the following rules regarding repairs, improvements and alterations to the building and the use, unless a special use permit has been granted pursuant to section 12-214(A) which provides otherwise:
 - (1) No alteration to a building which directly prolongs the life of a nonconforming use shall be permitted.
 - (2) Trade fixtures, such as refrigerator cases, kitchen equipment and other fixtures used in the business, may not be replaced or upgraded, although ordinary repairs and maintenance to trade fixtures is permitted.
 - (3) Building components, such as HVAC equipment, electrical service, siding, shingles and roofing, may be repaired, replaced or upgraded.
- (C) In the absence of any contrary provision in a text or map amendment, the provisions of this section 12-214 shall also apply to any nonconforming use created after (May 16, 1998).
- (D) Any convenience store existing on October 16, 1999, and any such store thereafter established, shall be considered to be a convenience store in perpetuity, notwithstanding the addition of floor area sufficient to remove the store from the size limitation set forth in the definition of such use, unless the store also adds features to the use which, regardless of size, are inconsistent with the definition of convenience store.

City of Alexandria, Virginia

MEMORANDUM

DATE:

SEPTEMBER 28, 2004

TO:

THE HONORABLE MAYOR AND MEMBERS OF CITY COUNCIL

THROUGH: PHILIP SUNDERLAND, CITY MANAGERO

FROM:

RICHARD BAIER, P.E., DIRECTOR, T&ES

WILLIAM SKRABAK, DIVISION C

SUBJECT:

REPORT ON MIRANT POTOMAC RIVER POWER PLANT

This memorandum provides a report on the activities concerning the Mirant Potomac River Power plant that Council directed to be undertaken this past June, and includes a summary of the recently announced agreement among the Virginia Department of Environmental Quality, the U.S. Environmental Protection Agency, the U.S. Department of Justice and Mirant regarding certain emissions from the Potomac River plant and three other coal-fired power plants operated by Mirant in the Washington, D.C., metropolitan region.

On June 22, Council instructed staff to undertake actions relating to the Potomac River plant in nine separate areas. Each of these areas is addressed below.

1. Land Use Regulation of the Potomac River Plant

In June, Council instructed staff to pursue the revocation of two special use permits (SUP 2296 and SUP 2297) issued to Mirant's predecessors in 1989, and to revoke the non-complying use status that was granted to the plant in 1992. The City Attorney's Office has been working on these issues, and will docket these three items before the Planning Commission on October 5. Council will consider them during its October 16 public hearing meeting.

2. Oxides of Nitrogen (NOx) Emissions from the Potomac River Plant

As you know, the Potomac River plant was issued a Notice of Violation (NOV) for exceeding its ozone season (May through September) NOx emissions limit in 2003. The Virginia Department of Environmental Quality (DEQ), the U.S. Environmental Protection Agency (EPA), the U.S. Department of Justice (DOJ) and Mirant have now reached a settlement on this violation and, as a result, a consent decree was filed in federal court on September 27. Notice of the consent decree will soon be published by EPA in the Federal Register, and public comment on the decree will be accepted and reviewed by EPA. Although the City was not a party to the settlement discussions, City staff, as instructed by Council in June, tracked the progress of the negotiations

ATMERMENT 3

and provided input designed to ensure that the interests of Alexandria were reflected in any agreement reached by the parties.

Since the consent decree arises out of a violation of the NOx emissions limit at the Potomac River plant, the decree contains a number of provisions that are directed at NOx emissions. However, these provisions are not limited to the Potomac River plant, but rather include NOx reductions and new emissions limits at Mirant's three other regional coal-fired power plants.¹

The following summarizes the decree's major provisions on NOx.

- a. At the Potomac River Plant, the decree places hard caps on NOx emissions for the summertime ozone season, with a cap of 1,750 tons established for 2004 which is reduced incrementally over time, ending with a cap of 1,475 tons in 2010. During the 2002 ozone season, the plant emitted 2,600 tons of NOx. Hence, the 2004 cap will result in a 33% reduction during the ozone season in NOx emissions compared with 2002 emissions. The 2010 cap will produce a 43% reduction. To meet these caps, Mirant will install Separate Over Fired Air (SOFA) control technology on Units 3, 4, and 5 by May 1, 2005 (along with the low NOx burners which were placed in service this summer). Though not required by the decree, Mirant is also pursuing the installation of low NOx burners on Units 1 and 2.
- b. The consent decree also places hard NOx caps which effect Mirant's other three regional coal-fired facilities. The decree places hard caps on NOx emissions on a system-wide basis (i.e., on the emissions from all four regional facilities) for both the summertime ozone season system and the entire year.
 - During the ozone season in 2002, the four regional Mirant facilities, together, emitted tons 19,250 of NOx. The consent decree requires NOx emissions from these four plants during the ozone season to decrease to 14,700 tons in 2004, a 23% reduction from 2002, and to decrease each year thereafter, ending with a limit of 5,200 tons in 2010, a 72% reduction from the emissions level in 2002.
 - During all of 2002, these four plants, together, emitted 45,000 tons of NOx. The consent decree requires total NOx emissions from the plants in 2004 to decrease to 36,500 tons, a 18% reduction from 2002, and to decrease each year over time, ending with a limit of 16,000 tons in 2010, a 72% reduction from the tonnage emitted in 2002.
- c. Last spring, DEQ proposed a revision to the operating permit for the Potomac River plant that limited NOx emissions during the ozone season to 1,019 tons.

¹ These three plants are all located in Maryland -- the 853 megawatt Dickerson facility, the 1,492 megawatt Morgantown facility, and the 2,429 megawatt Chalk Point facility. By comparison, the Potomac River plant has a capacity of 482 megawatts.

Under the consent decree, the Potomac River plant's revised operating permit will contain less stringent NOx limits -- i.e., as noted, there will be a NOx limit of 1,750 tons in 2004, and an increasingly lower limit in each subsequent year until 2010 when a ongoing limit of 1,475 tons is set. In this regard, four observations are in order.²

- First, for each ton of NOx above 1,019 tons emitted during the ozone season at Potomac River plant, but below the applicable hard cap, Mirant will reduce many more tons of NOx at its three other facilities. Thus, during the summer of 2005, for every ton above 1,019 allowed to be emitted at the Potomac River plant, six tons of NOx will be reduced at the other three regional Mirant facilities. In 2010, the ratio will increase to 1:30 -- i.e., in 2010, for every ton of NOx allowed to be emitted at the Potomac River plant above 1,019, approximately 30 tons of NOx will be reduced at the three other Mirant facilities.
- Second, compliance with the hard NOx caps applicable system-wide to the four Mirant facilities <u>may not be achieved through the purchase of pollution credits or other trading devices</u>.
- Third, the air quality in Alexandria, as a result of consent decree's systemwide NOx caps, will be considerably better over time than it would be if the NOx limit at the Potomac River plant were set at 1,019 tons and the other three Mirant facilities were left with no limits on their NOx emissions.³

The region's (as well as Alexandria's) air quality problems associated with NOx emissions stem primarily from the emissions' role in forming secondary pollutants, particularly, summertime ozone and fine particulate matter (PM2.5). These secondary pollutants are generally formed away from the source of the NOx emissions. Thus, the NOx emitted from the Potomac River plant form the vast majority of their ozone and secondary

² DEQ will likely propose an amendment to the draft operating permit for the Potomac River plant that was released for public comment in April 2004, in order to make it consistent with the consent decree. It is our understanding that DEQ will provide a public comment period on this amendment.

³ It is important to note that currently there are no permit or other limits on the NOx emissions at the three Mirant facilities in Maryland, and there is no statutory, regulatory or other enforceable obligation for Mirant to reduce NOx emissions at these facilities. Absent the consent decree, and Mirant's underlying agreement to reduce emissions at these facilities, the NOx emissions from all of Mirant's regional facilities would be substantially greater than they will be under the decree; this is also the case even if the more stringent ozone season cap of 1,019 were applied to the Potomac River plant.

PM2.5 some distance from Alexandria. On the other hand, the three other Mirant facilities covered by the consent decree are to the south, southeast and northwest of Alexandria. The work undertaken for the City by Dr. Jonathan Levy demonstrates that emissions from these facilities impact Alexandria, and form secondary pollutants in Alexandria.

As a result, not only will the significant NOx reductions required by the consent decree at the Potomac River plant and Mirant's three Maryland facilities improve air quality in the City, but, in addition, that improvement will be much greater than if the decree only required Mirant to meet a 1,019 ton summertime NOx limit at the Potomac River Plant.

• Finally, were a 1,019 ton NOx limit placed on the Potomac River plant, control equipment that involves the shipment and storage of ammonia would likely be required. The City has not favored the addition of such equipment to the plant, in part out of a concern with the ammonia, and in part because the equipment, due to its substantial cost, would lengthen the life of the plant.

4. Particulate Emissions From the Potomac River Plant

The just-announced consent decree (largely, as a result of City efforts) also identifies a number of control measures -- referred to as "Environmental Projects" -- that will achieve significant reductions in particulate and fugitive dust emissions from the Potomac River plant. These reductions will produce direct and measurable air quality improvements in the immediate neighborhood of the plant.

A summary of these control measures is provided below.

a. New Controls to Reduce Fine Particulate Emissions (both PM2.5 and PM10)

- Installation of additional, secondary bag houses at the facility that collects the bottom and fly ash produced by the coal combustion process. This facility is the largest source of non-stack particulate emissions at the plant, and emissions from this facility are of major concern to the surrounding community. These bag houses are expected to reduce particulate emissions from this facility by up to 30 tons a year. The consent decree requires their installation by September 2005.
- Installation of ash loader upgrade. This upgrade to the ash collection equipment is expected to reduce particulate emissions by up to 200 pounds a year. The consent decree requires the installation of this equipment by June 2006.

- Addition of a dust suppression system to the ash loading process. This involves the installation of a water fogging system at certain points in the loading process. This is expected to reduce particulate emissions by up to 200 pounds a year. The consent decree requires the installation of this equipment by June 2005.
- Installation of a truck washing facility. Considerable fly ash is "kicked up" by trucks leaving the ash handling facility and contributes to particulate pollution in the plant's neighborhood. The consent decree requires the installation of a permanent truck washing facility which will lessen this source of pollution. This new equipment is expected to reduce particulate emissions by up to 13.7 tons a year. The consent decree requires its installation by July 2005.

b. New Controls to Reduce Larger Particulate Emissions (larger than PM10)

- Installation of coal pile wind erosion and dust suppression system. This involves installation of a 12-foot high fence around the perimeter of the coal pile, along with a wind screen, to reduce wind erosion of the pile. This is expected to reduce particulate emissions by up to 2.8 tons a year. The consent decree requires its installation by April 2005.
- Installation of coal pile conveyor suppression system. This involves the spraying of a "binding agent" on coal as it is dropped onto the coal pile. The "binding agent" will assist in preventing particulates from escaping from coal both when being dropped onto the pile, and when on the pile and subject to wind. This is expected to reduce particulate emissions by up to 800 pounds a year. The consent decree requires this project to be completed by December 2004.
- Installation coal rail car unloading suppression system. This involves the spraying of a mixture of water and binding agent on coal while being unloaded from rail cars. It is expected that this will reduce particulate emissions by up to 200 pounds a year. The consent decree requires this project to be completed by June 2006.

c. Settled Dust Study

Apart from these additional controls of particulate matter emissions from locations other than plant stacks, the consent decree requires Mirant to conduct a Settled Dust Study. This is not the Downwash study which is discussed below. Rather, this study includes the daily and weekly collection of settled dust samples at a number of stations along the perimeter of the plant, and the analysis of these samples by qualified consultants outside of the Mirant laboratories. This study is to begin no

later than November 2004 and be completed within six months. Mirant is required to make the results of this study public.

5. Downwash Study and Follow-Up Activities

Separate from the consent decree, Mirant has reached a consent order with the DEQ for a Downwash study of the Potomac River plant. The order requires Mirant to:

- conduct a refined modeling analysis, pursuant to a protocol approved by DEQ, to assess the effects of "downwash" from the plant on ambient concentrations of SOx, NOx, CO, and PM10;
- perform a refined modeling analysis, pursuant to a protocol approved by DEQ, to assess the effects of "downwash" from the plant on ambient concentrations of mercury; and
- if the modeling demonstrates any exceedences of applicable standards, submit a corrective action plan within 90 days that eliminates and prevents such exceedences on a timely basis, and following DEQ approval, undertake the action plan.

The City is retaining a consultant to review the protocol of this study. The community will also be able to review and comment on the protocol. In staff's discussions with DEQ, the agency has indicated that, upon receiving and reviewing the Mirant analysis, it will perform its own analysis for other hazardous air pollutants.

Upon receiving the protocol for the proposed study, City staff with its consultant will review, comment and make recommendations to DEQ. We also will closely track and monitor the technical issues related to this effort.

All in all, staff believe that the consent decree and consent order are reasonable actions that will have significantly favorable impacts on air quality in Alexandria and the region. Anyone desiring a copy of the lengthy consent decree that has been filed in federal court or the consent order, please give Mr. Baier a call.

6. Virginia General Assembly Legislation

City staff continues to work with our local delegation on legislation, such as the Virginia Clean Smoke Stacks Bill, that would impact operation of the Potomac River plant. We envision such legislation being introduced during the 2005 General Assembly session.

7. Mirant Bankruptcy Proceeding

Under its terms, the consent decree will not be binding on Mirant until it is approved by the Federal Bankruptcy Court for the Northern District of Texas, which has jurisdiction over

Mirant's pending bankruptcy proceeding. Mirant has 60 days to submit the decree for approval by the bankruptcy court. The City Attorney and the City's outside counsel are reviewing the decree in order to assess what impact, if any, it has on any representations the City will make to the bankruptcy court regarding the continued operation of the Potomac River plant.

8. Quarterly Facility Audit of Potomac River Plant

Outside of the consent decree and consent order, City staff have met with representatives from Mirant who have agreed in concept to fund a quarterly facility audit that would be conducted by an independent consultant. Although the scope of the audit has yet to be worked out, we anticipate it would include:

- the monitoring of Mirant's implementation of its obligations under the consent decree and consent order that involve actions at the Potomac River plant;
- the review of the plant's emissions to ensure compliance with all applicable permits and regulations; and
- the review of the plant's operation and maintenance practices to ensure that the facility is running as "clean" as possible under the applicable regulatory framework.

9. Upcoming Federal Regulations Which will Impact Potomac River Plant

There are several federal regulatory actions that may impact operations at the Potomac River plant, as well as Mirant's other coal-fired power plants in the region. The impact of these actions on the Potomac River plant is unclear at this time. Staff will continue to track these developments and keep Council informed. Two of the upcoming actions are discussed below.

a. PM2.5

EPA is currently in the process of designating non-attainment areas for the PM2.5 air quality standard (annual mean 15 microgams per cubic meter). Currently, all the PM2.5 monitors in Virginia show compliance with the standard, but measurements in the District and Prince George's County show non-compliance. Based on the data from the District and Prince George's County, EPA is considering designating the entire Washington metropolitan area, including Northern Virginia, as "non attainment" for PM2.5. A final decision is scheduled for release in November 2004.

The schedule and requirements for PM2.5 non-attainment areas are:

November 2004	Final non-attainment designations are made
February 2005	Designations become effective and implementation
	guidance is released
February 2008	State Implementation Plans (SIP) are submitted
February 2010	Attainment is required

b. 8 Hour Ozone Standard

The standard for ozone is in a transition from the 1-hour standard of 120 ppb (parts per billion) to an 8-hour standard of 80 ppb. The region must develop and submit a SIP for the new 8-hour ozone standard by April 2007, and must meet that standard by April 2010. It is anticipated that additional control measures in the region will be required to reduce emissions to meet the standard.

One final Mirant-related item that, in June, Council asked staff to pursue is the purchase of clean energy for City facilities. General Services is currently researching options in this area, and will pursue this in the FY 2006 budget process.

The above discussion shows the wide range of issues and associated information that pertain to the Potomac River plant -- issues and information in which much of the nearby community has considerable interest. In order to facilitate a more coordinated dissemination of information on these issues, we recommend that Council consider forming a Mirant monitoring group made up of five to seven community stakeholders. The primary purpose of the group would be to receive progress reports on the variety of issues involving Mirant and the Potomac River plant, and assist in the dissemination of timely and accurate information to the broader community. If Council wishes to form such a group, staff will docket this item with suggestions of potential members.

cc: Michele Evans, Assistant City Manager Mark Jinks, Assistant City Manager Bernard Caton, Legislative Director Ignacio Pessoa, City Attorney

ENVIRONMENTAL CONCERNS REGARDING THE MIRANT POWER PLANT

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6-22-04

Alexandria Environmental Policy Commission Resolution **June 21, 2004**Approved 9-0

WHEREAS, the Mirant Power Plant was constructed in 1949 and has not undergone recent significant upgrades to improve air quality; and,

WHEREAS, the Mirant Power Plant is land use incompatible with surrounding residential neighborhoods and sensitive environmental receptors; and,

WHEREAS, a study commissioned by the City of Alexandria and prepared by Dr. Jonathan Levy of the Harvard School of Public Health concludes that the Mirant Power Plant is likely the single source that contributes most to particulate matter (PM_{2.5}) levels in Alexandria; and,

WHEREAS, according to Dr. Levy's study, the Mirant Power Plant is on of the highest contributors of PM_{2.5} per megawatt of power produced of any of the five power plants in the region evaluated in the study; and,

WHEREAS, Dr. Levy's study estimates that the Mirant Power Plant contributes to approximately 0.9 deaths, 0.7 cardiovascular hospital admissions, and 0.4 pediatric asthma emergency room visits in Alexandria per year; and,

WHEREAS, Dr. Levy's study concludes that reducing emissions from the Mirant Plant would provide the most health benefits to Alexandrians; and,

WHEREAS, the electricity needs of the region are currently dependent on the Mirant Power Plant making it a complicated regional decision to take the plant off line; and,

WHEREAS, the Environmental Policy Commission has heard from concerned citizens and the City of Alexandria staff on the impacts of the Mirant Power Plant; and

WHEREAS, in the City's limited authority to regulate the plant, it has made recommendations to the State to be incorporated into the permit issued to the Mirant Power Plant;

THEREFORE BE IT RESOLVED, that the Environmental Policy Commission recommends that the City's goal should be to close Mirant Power Plant; and,

BE IT FURTHER RESOLVED, that the Environmental Policy Commission specifically recommends that the City:

- Rezone the parcels of land currently occupied by the Mirant Power Plant consistent with the future uses that the City anticipates after the plant is closed;
- Work closely with elected State officials to create legislation that will hasten the closure of the Mirant Power Plant; and,
- Support efforts by the State to ensure that nearby citizens and the environment are protected to the maximum degree possible until the facility is closed.

BE IT FURTHER RESOLVED, that the Environmental Policy Commission commends the City for its proactive efforts to retain Dr. Levy to conduct a city-specific study of the plant and commends the efforts of Elizabeth Chimento and Poul Hourtel to represent the citizens living directly adjacent to the plant.

Kenyon A. Larsen

Chair, Environmental Policy Commission

6-22-04

Date



Mirant Potomac River

City of Alexandria Planning Commission Hearing November 4, 2004

Mirant Potomac River Station

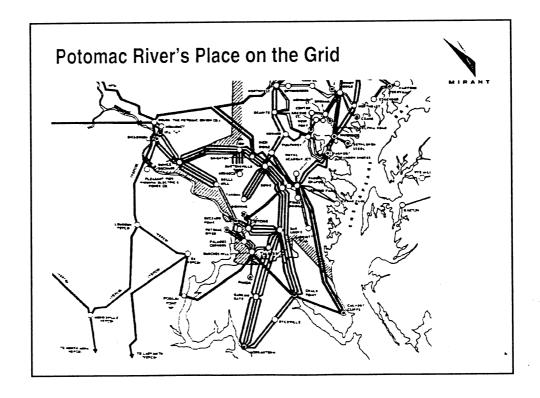


- Mirant is an important public service provider for the region
- Air quality is a regional issue, and Potomac River has only a small impact on the region's and Alexandria's air quality
- Mirant's regional agreement benefits Alexandria many times more than any single solution for Potomac River
- Potomac River has improved performance while providing the same public service to customers

Mirant Is an Important Public Service Provider for the Region



- The regional power operator requires that Mirant provide electricity to the regional grid – Potomac River is necessary for the reliability of the region's power supply because:
 - Reliability --- The plant is a vital and reliable component of the regional electric system. 97% availability in summer 2004.
 - National security --- It is important to the nation that Potomac River's supply remain online
 - Transmission stability --- Without the plant, the health of the transmission grid that it supplies could be jeopardized
 - Although Potomac River is 10% of Mirant's regional generation, it is a necessary component of meeting the region's power demands — without it, the Nation's Capital could risk a blackout



Air Quality is a Regional Issue, and Potomac River Has Only a Small Impact on the Region's and Alexandria's Air Quality





- Ten county region surrounding DC is viewed as a common air shed
- According to Dr. Levy's study,
 Potomac river contributes between 1-4% of Alexandria's local PM2.5
 - Potomac River's contribution to regional NOx levels is approximately 2-3% of total emissions

Regional Emissions Sources



70% of NOx emissions come from mobile sources:

- Cars & SUVs
- Trucks & Buses
- Airplanes & Boats

MOBILE/AREA SOURCES 70%

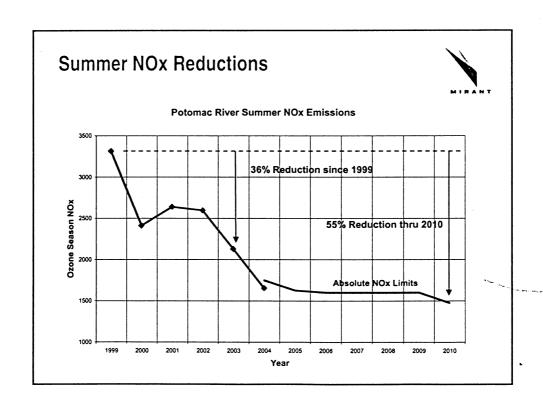
MOBILE/AREA SOURCES 70%

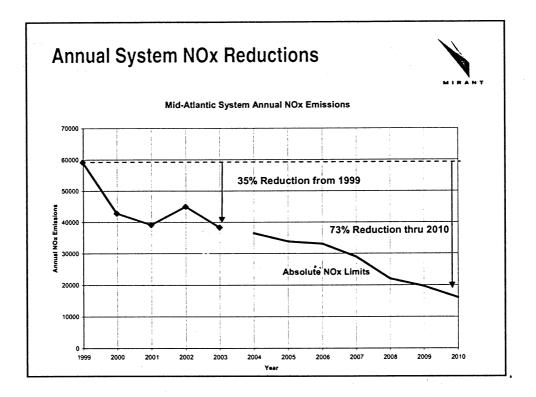
Potomac River 3%

Mirant's Regional Agreement Benefits Alexandria More Than Any Single Solution for Potomac River



- Under the draft permit discussed this spring, NOx reductions at Potomac River this summer would have been substantial.
- Under our recent agreement with DEQ, MDE and EPA, Mirant will reduce <u>8</u> times more NOx in the summer --- and <u>30 times more</u> on an annual basis, than the draft permit would have required.
- Mirant surrendered it's ability to trade for emissions by accepting new, absolute emissions limits at Potomac River and it's regional fleet.
- Additionally, Mirant will complete seven projects supported by Alexandria to help prevent local coal dust and fly ash emissions at Potomac River.
 - Projects to be completed by 2006
 - Every dust source identified by an independent third-party consultant will be controlled
- The agreement significantly benefits air quality in Alexandria, as determined by EPA, DEQ and the city's own Transportation and Environmental Services Department
- Reductions of NOx are federally enforceable under the agreement, and will be monitored by the city





Potomac River Has Improved Performance While Providing the Same Public Service to Customers



- Potomac River continues to provide public service to the region
 - Potomac River continues to meet the requirements of the local grid operator, which continues to call on the plant's output to meet demand and prevent blackouts
- Potomac River continues to improve environmentally NOx emissions have decreased and will continue to decrease
 - Since 1999, NOx emissions have decreased by 36%
 - By 2010, we will decrease NOx emissions by a total of 55%
 - Mirant has committed to significant capital investments to achieve these reductions --- Low NOx Burners on by end of 2004, SOFAs on by Summer 2005
- Dust emissions have also been reduced due to:
 - . Truck washing and dust suppressants
 - Commitment to seven projects through the consent order that continue to prevent and reduce dust by 2006
- Mirant has continued to improve the neighborhood
 - \$300,000 in landscaping improvements in 2001
 - \$50,000 contributed towards improved railroad crossings
- Mirant is a responsive and responsible neighbor to Alexandria's residents
 - \$6 million in spending with local Alexandria businesses over past 3 years
 - \$2 million annual real estate taxes
 - . 123 employees at Potomac River

Conclusions



- Revocation of SUPs will not address City's concerns
- The Planning Commission and City Council would be wise to assess the benefits of the recent settlement and consent order, as well as consider the plant's role in electric gird reliability prior to adopting measures which were contemplated in their absence

We are here today discussing a plant with a determination to ensure the health of Alexandria residents. Something that should have been done years ago. To be sure, we have come a long way over the past 3 years in our collective understanding of the scientifically verifiable health effects emanating from this plant.

No longer can the issues be panned of as "common dirt" as the plant reported in 2001. No longer do we accept the urban legends, which conjecture that the dangerous stuff flies far away, or if not, then it blows mostly to the north. Instead, we look to scientific approaches to ascertain what the health effects of the plant are.

Penn State, the Virginia Department of Environmental Quality, Jonathan Levy, Dave Sullivan, among others, have provided numerous scientific research papers and tests, all of which validate our initial concerns regarding this plant.

According to Dr. Levy, not only is Particulate Matter recognized to have serious health effects, but also science cannot find a lower threshold under which there are no health effects. Furthermore, the Mirant Power Plant "is likely the single largest contributor to $PM_{2.5}$ in Alexandria" with higher concentrations occurring closer to the plant.

So the "common dirt" is not so common and the stuff or fine particulates do affect us because particulate matter matters. Furthermore, the peculiarities of the plant create conditions that further compromise the health of the surrounding urban residential area in a significant manner.

Preliminary downwash studies suggest that national Ambient Air Quality Standards are being violated and that downwash is "screened to occur" at a nearby building 1200 hours per year. That is equivalent to 50 days.

It is, therefore, imperative that the City follow through on its motion to rezone the Property. As pointed out by the City Council, there is presently no guarantee that the plant will leave today, 20 years from now, or do anything about the Primary Particulate Matter spewing from the smoke stacks.

In conclusion, dealing with the health effect of fine particulate matter from the smoke stacks on contiguous populations is paramount. The EPA regulatory framework is limited to regional changes that do not address the local health issues. Only the zoning framework will. That is why we ask that the City Council, strongly focus on ensuring a healthy environment and this motion moves us in that direction.

Poul Hertel 1217 Michigan Court Alexandria Virginia 22314 Testimony on the Mirant Plant permit November 4, 2004 Planning Commission

Good evening. I'm Lillian J. White, co-president of the League of Women Voters of Alexandria. The League of Women Voters of the U.S. and local League's across the country support measures to control pollutants from mobile and stationary sources since the 1960s. Alexandria's League recently reaffirmed its commitment to its position on Air Quality.

Our research shows that the Potomac River Coal Power Plant located on Alexandria's waterfront is the number one stationary source of air pollution in our city.

We support the adoption of the text amendment revoking the plant's special use permits 2292 and 2297 and the revoking of the noncomplying use status.

We believe, Mirant, the owners have taken advantage of its noncomplying use status. Mirant has not complied with federal and state environmental regulations. Its persistent pattern of noncompliance, 8 out of 8 quarters in a 2 year reporting period violated the Clean Air Act and its designation as a High Priority Violator warrants revoking its special-use-permits-and noncomplying use status.

In addition, the plant was cited for excessive emissions of Nitrogen Oxide, (NOx) a component of ground level ozone by the state, the Department of Environmental Quality last year. The notice was based on Mirant's own monitoring report of 2,139 tons of NOx emissions, 1,120 over the 1,019 state standard. In January, this year, the plant was cited by Environmental Protection Agency, EPA. On top of this, the state of Maryland and the United States on behalf of the EPA and the Justice Department filed a joint complaint against

Mirant and the Commonwealth for violations at this plant asking for injunctive relief and civil penalties. Virginia's code allowed the Commonwealth to intervene. So, Virginia as we know became the intervenor plaintiff against Mirant.

Mirant denies any violations. But agrees to the Court consent decree.

For Alexandrians' the consent decree is simply not a fair deal. It is not a fair deal that federal and state officials agreed to increase the plant's NOx levels from the state standard of 1,019 to 1,750 tons during the 2004 ozone season to compensate for Mirant's Maryland plants excessive emissions. It's absurd that the parties settled for a benchmark of 2,600 tons, a violation that occurred in 2002, to calculate emissions instead of at the Virginia state standard of 1,019 or below. Two thousand six hundred is 1,581 tons above the current Virginia standard. It is not a fair deal that federal and state officials accepted civil penalties for the Potomac River plant's violations which are far less than the Clean Air Act prescribes, \$25,000 a day amounting to about 3 million alone for the year 2003. We should not take the hit for Maryland's poor governing on this issue. The state of Maryland should have and should be encouraged by DEO and EPA to issue permits, write statutory regulatory or other enforceable obligations for Mirant's plants across the river to reduce excessive NOx and other toxic emissions. Tell Maryland to take responsibility, not just dump on Alexandria.

It is not a fair deal that particulate matter 2.5, which is the most harmful to children and adult's health is not included in our state operating permit.

On top of this, we all know the plant on Alexandria's waterfront provides power for D.C. and Maryland. Mirant then sells wholesale. In other words, Alexandria gets the pollutants while D.C. and others get the power.

When the Clean Air Act was enacted in the 1970s it was assumed that older coal power plants such as Mirant would close after the 30 year projected life and be replaced by cleaner new plants. Obviously, this did not happen. So, the plant still operates after 50 years and has not been required to install the maximum achievable control technology to combat air pollution or use best practices on the coal pile or transport of coal and flyash through our city.

Mirant has not been a friendly corporate neighbor. Excessive NOx emissions is a very serious matter. Particulate matter emissions is a very serious matter. Toxic metals emissions are a very serious matter. These conditions and the plant's short smokestacks, shorter than most plants because of its nearest to Reagan National Airport, causes the plume to hover over our city and downwash on the nearest residence to the plant.

We support the city's recommendation to complete downwash studies, particularly on particular matter 2.5 and toxic metals before accepting any amendment to the state permit.

We strongly support the city's proposed land use regulation: the adoption of the text amendment revoking the plant's special use permits 2292 and 2297 and the revoking of the noncomplying use status.

This use is not a compatible use for Alexandria's waterfront or nearby residential areas, or Alexandria. As studies have shown, emissions from this 50 year old coal power plant are harmful to our health. We also object to any bankruptcy reorganization plan which includes continued operation of this plant. It should go away. We will all breath easier. Thank you for the opportunity to comment on this very serious matter.

Sincerely, Lillian J. White Planning Commission Meeting Nov. 4, 2004

Re: Revocation of Special Use Permits No. 2296 and No. 2297 and Text Amendment change for the Potomac River Generating Station from Non-Complying to Non-Conforming

Planning Commission Members:

I am Elizabeth Chimento and live a block south of the Mirant Plant. For four years, Poul Hertel and I have investigated problems with the plant, focusing on scientific studies, modeling and laboratory testing. Health effects on both the adjacent neighborhoods and the city from this plant (listed below) are serious, necessitating the SUP revocations and text amendment requested this evening:

- 1. Small soot particles (2.5 microns and less) emitted from coal-fired power plants are associated with increases in asthma, upper respiratory illnesses, lung cancer, heart disease and strokes.
- 2. The Potomac River Power Plant "is likely the single largest contributor to PM 2.5 in Alexandria." (Dr. Jonathan Levy, Harvard School of Public Health)
- 3. Chronic exposure to particulate matter shortens life expectancy from one to three years. (C. Arden Pope, Brigham Young University)
- 4. The EPA, recognizing the health effects from exposure to 2.5 particles, currently recommends the acceptable limit be lowered from 15ug/m to as low as 12ug/m, which would result in Alexandria's exceeding the National Ambient Air Quality Standard (NAAQS).
- 5. A preliminary study on downwash, conducted by Sullivan Environmental Associates (3/04), indicates that downwash is occurring on the upper floors of Marina Towers as often as 1200 hours per year. This means that the NAAQS are probably being exceeded at that site. Other tall buildings south of the plant must be tested as well to determine if downwash is occurring at those locations.

Due to these serious problems, I urge you to withdraw the SUP's and effect the zoning change to protect the public health of Alexandrians.

Respectfully, Elizabeth Chimento 1200 North Pitt Street Alexandria, VA 22314 Statement of Michael E. Hobbs on behalf of the Old Town Civic Association Planning Commission November 4, 2004

Test Amendment #2004-0008 (Nonconforming Coal Fired Power Plants)

Thank you, Chairman Wagner and members of the Commission. I am Michael Hobbs, President of the Old Town Civic Association, and I thank you for this opportunity to share our views on this proposed text amendment.

We support the recommendation of the City Attorney that you adopt this amendment to the zoning ordinance to categorize coal-fired electrical power generating plants as nonconforming uses, subject to abatement. We support also the related recommendations, in docket items #14B and 14C, that you revoke the existing SUPs for the construction of the administrative building and approval of the required Traffic Management Plan for the Mirant Potomac River Generating Station in north Old Town.

We understand that the effect of these actions would be, first, to categorize the Mirant Power Plant as a nonconforming use, subject to abatement; and second, to require that the plant seek new SUPs from the city, applying to and regulating the entire plant, before receiving any future city permits for construction or upgrades.

We are aware of the consent decree now pending in the federal courts reflecting the agreement between Mirant and the Federal and State environmental regulatory agencies, requiring steps to reduce NO_x emissions from the stacks at the plant. We are aware, too, of the planned "soiling study" which will attempt to determine whether coal dust from the plant is the source of the residue reported by residents in Old Town. Those are important and laudable steps toward identifying and removing potential threats to the health of Alexandrians. But they do not by themselves address, let alone remove, what may be the most serious threat to our health, which is the emission of Primary Particulate Matter (PM_{2.5}) from the plant's five stacks.

A "downwash study" to be conducted under a protocol specified by the Virginia DEQ may give us more answers. But we already have more than ample evidence that emissions from this plant have constituted what the City Attorney calls "a persistent pattern of noncompliance" with the federal Clean Air and Clean Water Acts; and we have Dr. Jonathan Levy's conclusion that the Mirant Power Plant "is likely the single largest contributor to PM_{2.5} in Alexandria," with higher concentrations occurring closer to the plant.

It is conceivable that the actions taken in response to the consent decree, and the results of these contemplated studies, will lead City Council ultimately to conclude that any threat to the public health and safety in Alexandria is insignificant, or has been removed. Given what we know now, however, that seems highly improbable—and whatever the probability is, the Council and Planning Commission should not gamble the public health against a speculative outcome. The

City needs to have every possible legal and regulatory tool at its command to <u>ensure</u> the outcome that it can protect the public health to the maximum extent possible. Reclassifying the plant to nonconforming use status, and revoking its existing special use permits, are important and perhaps essential means to that end, and should be adopted.

Thank you for your consideration.

Dr Levy Study

There are serious health effects associated with fine particulate matter (PM 2.5).

- 1/3 of Pm2.5 likely associated with cars and 1/2 with Power Plants page 5
- Studies have shown repeatedly there are no lower thresholds under which PM
 2.5 has no effect. page 6
- From the EPA Particulate Matter Staff paper the following quote.
 "...Staff believes that it would be appropriate to consider a range of PM 2.5 levels for an annual standards that extends down from 15 to as low as 12."
 Page 6

For Alexandria, the concentration of both primary and secondary particulate matter is highest surrounding the plant.

- "Higher concentrations occur closer to the plant" page 10
- "Potomac River plant responsible for 70% of the coal generated particulate matter PM 2.5 near the facility" page 16
- Although population is 0.2% of region the city has 1% of the health effects. "
 This is because the PM 2.5 contribution is higher in Alexandria than in many parts of the region" page 20
- "Controls at Potomac River Plant would provide the greatest benefit to public health in Alexandria" page 22
- "Potomac river plant is likely the single source that contributes most to the PM2.5 levels in Alexandria", page 25

From: Glazer, Craig

Sent: Thursday, November 04, 2004 4:34 PM

To: 'erwagner@comcast.net'

Subject: SUBMITTAL BY PJM FOR PLANNING COMMISSION HEARING ON POTOMAC RIVER GENERATING

STATION

Mr. Wagner:

I am the Vice President of Government Policy for PJM Interconnection. PJM is the Regional Transmission Organization responsible for ensuring reliability of the transmission grid in the greater DC metropolitan area. We are an independent entity with a fiduciary responsibility to maintain the reliability of electric supply in the region. We are regulated by the Federal Energy Regulatory Commission.

We have done analysis on the potential impact of a partial or complete closure of the Potomac River Generating Station. I would like to submit for the record and for your consideration the attached letters we previously sent to the Virginia Department of Environmental Quality detailing our initial findings and their impact on the reliability of electric supply in this region.

. Unfortunately, I most likely will not be able to attend this evening's hearing. However, we would like very much to have the opportunity to meet with the Planning Commission and its staff and any consultants you have retained to analyze the reliability issues surrounding the plant. As the electric reliability coordinator for the region, we have the critical information that any consultant would need to examine in order to make an appropriate conclusion. I can be reached as listed below. In the interim, I want to reiterate that we stand ready to work with the City of Alexandria to ensure that any solution it determines is consistent with the maintenance of reliable electric supplies for the City of Alexandria and the nation's capital region as a whole.

Let me know what additional information you need and how I can be helpful.

CRAIG GLAZER

Vice President--Government Policy PJM Interconnection, L.L.C. Suite 600 1200 G Street, N.W. Washington, D.C. 20005 202-423-4743 (cell) 202-393-7756 (office messages) 202-393-7741 (fax) GLAZEC@PJM.COM



Craig A. Glazer

Vice President - Governmental Policy PJM Washington Office (202) 393-7756 .FAX (202) 393-7741 e-mail: glazec@pjm.com

April 12, 2004

Via Electronic Mail

Director
Office of Air Regulatory Development
Department of Environmental Quality
629 East Main Street
P.O. Box 10009
Richmond, Virginia 23240

Re: Potomac River Generating Plant

Dear Director:

PJM Interconnection L.L.C. ("PJM") is the Regional Transmission Organization responsible for the maintenance of electric reliability in the service territory of Potomac Electric Power Company (PEPCO). The Potomac River Generating Plant which serves greater Washington, D.C. is within the PJM Control Area. We are writing in response to your request for formal written comments concerning a proposed amendment to the state operating permit for the Mirant Mid-Atlantic Potomac River Station located in the City of Alexandria, Virginia. This letter is similar to one we previously submitted to Mirant on April 7 in response to their request and is a supplement to our letter of March 2, 2004 to Jack Welsch, a copy of which is attached for submission in the record.

This letter does not address the impact that any set of emissions standards might have on the availability or operations of the Potomac River power plant. Rather, PJM has taken as its assumption the representation made by Mirant of a limit in production by as much as 50-60% from historical levels. PJM Interconnection LLC ("PJM") has reviewed the requirement for this plant strictly from a reliability perspective in order to determine what is required to maintain suitable reliability in the region. PJM's reliability standards are governed by Mid-Atlantic Area Council ("MAAC") criteria. MAAC criteria states that the system must be planned to sustain the loss of one transmission element with any other transmission system element out of service (an N-2 contingency) under peak load conditions. As explained below, PJM expects that a minimum of three Potomac River units must be running at all times during moderate load periods (moderate load period is approximately between October and June) and all five units must be running during the summer peak load time period (approximately June through September) in order to ensure reliability.

As discussed in Denise Foster's letter to the Virginia DEQ dated March 2, 2004, recent analysis has confirmed that a minimum of one Potomac River unit must be available at peak load conditions to eliminate any reliability concerns. One unit is sufficient if both of the two Palmers Corner 230 kV circuits are in service. In the event

of an outage of either Palmers Corner-Blue Plains 230 kV circuit sufficient generation must be available to balance the load in the area for the loss of the other 230 kV circuit. While the exact MWs of generation required depend on the load existing at the time of the outage, review of the historical area data indicates that under all circumstances between three and five Potomac River generators would be required to maintain reliability when either of the Palmers Corner 230 kV circuit are out of service. For example, in the event one of the lines to the Potomac River plant is out of service due to maintenance, the system must be adjusted in order to be prepared to lose the next line as well.

Peak load for the summer in this region occurs between June 15 and September 15. During this period, PJM anticipates that all units would be required to be available to run in order to ensure reliability, as described above. The requirement "available to run" means the units must be made available within four hours of an unplanned trip of one of the 230 kV transmission lines serving the Potomac River plant. The start up data that has been provided to PJM by Mirant shows that the Potomac River plants require a minimum of 43 to 83 hours notice to start from the cold state.

During summer peak conditions, all five of the Potomac River units should be required to remain available within a four hour period, or remain "hot." PJM further anticipates that under typical non-peak conditions, two or three of the units would be required to remain hot for seven days a week. All five units would be required to remain hot and available to run from Tuesday through Friday each week, in order to accommodate days of the week when the load has historically reached its highest level. Theoretically, and depending on load, certain units could be shut down for the weekend with prior approval from PJM.

In summary, if Mirant intends to run the units with production decreased by 50-60%, this situation may cause the transmission system to be non-compliant with PJM's reliability standards, and PJM would request permission to have these plants available for reliability purposes.

PJM has had limited time to analyze all of the facts and consider alternatives that would address the DEQ's environmental concerns while also ensuring the continued reliability of electric power supply in greater Washington. We would welcome the opportunity to work with you and the Department in order to explore the facts further and determine a resolution that meets our respective public policy goals. Please contact the undersigned or Ms. Denise Foster of PJM should you wish to discuss this issue further.

Sincerely,

Craig Glazer
Vice President—Government Policy
PJM Interconnection, L.L.C.
202-393-7756
GLAZEC@PJM.COM



March 2, 2004

Jack Welsch, Enforcement Specialist Northern Virginia Regional Office Virginia Department of Environmental Quality 13901 Crown Court Woodbridge, VA 221293

Re: Potomac River Generating Units

Dear Mr. Welsch,

This letter is being provided in response to your inquiry regarding the Potomac River generating units owned by Mirant. During our phone conversations, you asked the following questions:

- Explain what is meant by the term "must run."
- Identify what analysis PJM may have done to date to determine whether Potomac River is determined to be "must run," or expected to be "must run" in the future, during certain system conditions (i.e., at what level of reduced output may Potomac River units operate without posing a reliability concern). Would there be any economic impacts on the energy market?
- Recognizing that PJM may need the Potomac River units to operate during certain system conditions in order to ensure local reliability, are there any windows of time that the units (separately or jointly) may be taken off-line to allow installation of equipment to reduce emissions?
- If Mirant were to decide to retire any or all of the Potomac River units, would there be any impact on reliability or on the PJM energy markets?
- If any reliability issues are identified under a production curtailment or unit retirement scenario, would any transmission upgrades offset the reliability impacts? Or, stated another way, are there any transmission upgrades that could be considered that would eliminate the "must run" status for the Potomac River units? How costly would those upgrades be?

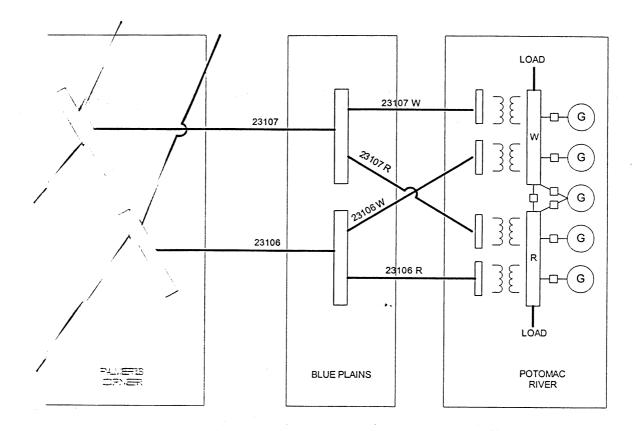
I previously provided you with copies of the PJM Market Monitoring Unit's reports dated July 1999 and June 2002 to the District of Columbia Public Service Commission which addressed the potential need for the operation of the Potomac River units to control

transmission constraints in the Washington, D.C. area (i.e., "must run"), and Joe Bowring, Manager of the Market Monitoring Unit ("MMU"), held a conference call with you to discuss them. In those reports the PJM MMU concluded that Potomac River will likely be determined to be "must run" for reliability in 2003 and subsequent years furthing peak demand periods, and that it will be "must run" for reliability in 2002 and subsequent years during off-peak demand periods when one of the two transmission lines into the area is out of service for maintenance or as a result of a forced outage. PJM's review of the cost capped hours for 2003 of the Potomac River units confirms the MMU's expectation that there likely would be hours when generation from Potomac River was needed to ensure local reliability.

A unit is determined by PJM to be "must run" if, as a result of identified transmission constraints, PJM determines that a generator must be run to maintain the reliability of the PJM system.

Recent analysis has confirmed that a minimum of one Potomac River unit must be available at peak load conditions to eliminate any reliability concerns. These results are based on no outages to either Palmers Corner 230 kV circuit (shown in the diagram below).

Under the outage of either Palmers Corner – Blue Plains 230 kV circuit (shown in the diagram below) sufficient generation must be available to balance the load in the area. While the exact MWs of generation required depend on the load existing at the time of the outage, review of the historical area load indicates that under all circumstances, between three and five Potomac River generators would be required for reliability purposes when either Palmers Corner 230 kV circuit are outaged.



At ower losi periods, typically between October and April, there is expected to be sufficient windows of time to allow the Potomic River units to be scheduled out of service to intall equipment to reduce emissions. These windows would need to be pordinated by PDM with any scheduled outages of the Palmers Corner – Blue Plains 230 and introducts to limit potential reliability impacts.

PIN did not perform any specific analysis to attempt to quantify the economic impact under various scenarios of Potomac River generator outages (i.e., 1 unit out versus 2 units out or winica particular units could be out). PJM notes that the more generation in this area that its unavailable for dispatch the greater the possibility that PJM would have to dispatch more cossily generation in order to ensure that load and generation are in balance, especially during peak periods.

The last question you raised was whether any transmission upgrades could be considered iff the Pottomac Rriver units were to curtail production or retire. There are several upgrades that PMM could consider including enhancements to existing facilities or the addition of new facilities to mitigate any reliability problems. PJM does not anticipate that enhancements it existing facilities would result in any significant increase in import capability into the area. At this time, PJM has not completed any analysis to determine cost or estimated completion time of any transmission expansion options.

I thank you for contacting PJM with these questions and considering in advance how the actions your agency takes regarding Potomac River generation may affect the reliable and economic operation of the grid. I hope that this information is helpful to you in your discussions with Mirant regarding their environmental compliance issues. Please do not hesitate to contact me if you have any additional questions.

Yours truly,

Denise R. Foster Senior Counsel

cc: Deborah Jennings,
Counsel for Mirant
Steven Herling, PJM
Scott Gass, PJM
Joseph Bowring, PJM
Robert Reed, PJM

ALEXANDRIA CHAMBER OF COMMERCE

801 N. FAIRFAX ST. SUITE 402 ALEXANDRIA VA 22314 PH 703.549.1000 FX 703.739.3805

www.alexchamber.com



Accredited by the Chamber of Commerce of the United States of America

November 02, 2004

Eric Wagner Chairman City of Alexandria Planning Commission 302 King Street Alexandria VA 22313

Dear Mr. Wagner:

Mirant has been an active member of the Chamber and has been valued member of the business community for years. We appreciate the contributions they have made to the Chamber.

2004 ANNUAL CORPORATE SPONSORS:

Although we are not familiar with any of the issues (zoning, tax, environmental, etc.) facing Migrant vis-à-vis the City, we do ask that they be treated with the same fairness, balance and respect that any citizen or business would expect (and receive) in dealing with the City.

Comcast

Sincerely,

MANDY RESTAURANT CRUISE SHIPS

Ken Moore

RUISE SHIPS President & CEO







17 13-04

HART, CALLEY, GIBBS & KARP, P.C.

ATTORNEYS AND COUNSELLORS AT LAW

307 NORTH WASHINGTON STREET ALEXANDRIA, VIRGINIA 22314-2557

HARRY P. HART MARY CATHERINE H. GIBBS HERBERT L. KARP

TELEPHONE (703) 836-5757 FAX (703) 548-5443 hcgk.law@verizon.net OF COUNSEL CYRIL D. CALLEY

RETIRED ROBERT L. MURPHY, 2001

November 12, 2004

MEMORANDUM

To:

Mayor Euille and Members of the City Council

From:

Harry P. Hart, Counsel to Mirant Mid-Atlantic LLC 7

Cc:

Ignacio Pessoa, City Attorney

Philip Sunderland, City Manager

Re:

Text Amendment #2004-08

BACKGROUND:

- Mirant is an important service provider for the region.
- Air quality as related to its 4 plants in the region has continued to improve during its 4 years in this area that air quality is regulated by the EPA, Virginia Department of Environmental Quality and Maryland Department of the Environment.
- Those agencies and Mirant have submitted a consent decree to the Court which provides much better air quality improvement by 8 times during the summer and 30 times during the winter than could be achieved by any action taken solely at the Potomac River Plant in Alexandria. This means that the City of Alexandria benefits from the consent decree by several times over what it could benefit by any local action. See, e.g., the September 28, 2004 report of T&ES at pp. 73 and 74. At page 74 the report states "As a result, not only will the significant NOx reductions required by the consent decree at the Potomac River plant and Mirant's three Maryland facilities improve air quality in the City, but, in addition, that improvement will be much greater than if the decree only required Mirant to meet a 1,019 ton summertime NOx limit at the Potomac River Plant."
- The resolution that is in process goes far beyond what any local zoning action could provide and in fact such zoning actions could stifle the improvement.

Page 2 of 5 November 12, 2004

• 123 employees at the Alexandria plant are working conscientiously to provide a public service in a beneficial way. They believe they are helping and not hurting the local community.

ISSUE:

Is it proper and advisable for the City Council to amend the Zoning Ordinance in an effort to change the Mirant Potomac River Generating Station from a noncomplying to a nonconforming use?

SUMMARY OF RESPONSE

We submit that it is actually cannot be demonstrated that its requested change in the Zoning Ordinance is either lawful or wise. Essentially, this is a piecemeal downzoning with no change in circumstances nor an original mistake. In fact, the only changes recently have been for the better. This text amendment is not a merely a change in category, it is specifically aimed at only one use at one place. For all intents and purposes, it is a revocation/punishment without a finding of guilt. The Mirant plant represents a significant investment that cannot be disregarded by the simple expedient of changing its use category. The Mirant plant provides a significant public benefit with nowhere near the adverse impacts that have been alleged.

The language of the ordinance itself and of the City Council's policy adopted in June 2004 are diametrically opposed to the granting of an SUP at any time in the future, as is suggested in the memorandum from the City Attorney. The City cannot claim, on the one hand, that the plant is wholly incompatible with uses around it and, on the other hand, seek to control the issuance of, or changes to, a use permit that requires that the use be compatible with the existing uses around it. See § 12-214(A)(3) and § 11-504(A) and (B)(10) This is an effective deprivation of the right to continue a lawful use without a charge and an opportunity to face and rebut that charge.

There are also considerations of Commonwealth and Federal law that, we submit, limit the City's ability to use the zoning power to shut down an electrical power plant that is a part of an interconnected transmission and distribution grid that provides electricity to the Alexandria Page 3 of 5 November 12, 2004

region, an area serving millions of people living in ten counties in Virginia and Maryland and comprised of hundreds of square miles. In addition, the text amendment is seeking to eliminate a use worth more than the recent investment of hundreds of millions of dollars; and where 123 local people work in the belief that they are helping, not hurting, their community.

RECOMMENDATION

We submit that the City Council should not take any action against the plant. The Consent Decree should be allowed to work while all parties assess the true impacts of the plant.

DISCUSSION:

<u>Text Amendment 2004-008</u> is tailored to address only the Mirant plant which has been located at this site for over 50 years.

The Text Amendment is one of a menu of "enforcement" mechanisms that the City seeks to impose on the Mirant plant based on the its expressed goal of shutting down the plant. The purpose of the proposed Text Amendment is to try to avoid the legal problems associated with a comprehensive re-zoning while seeking to limit the City's exposure for an uncompensated taking of Mirant's property.

Although the City's outside counsel recommends that a full analysis of the issues be conducted prior to implementing steps to achieve the goal regarding the plant, the Text Amendment is before the Council without such an analysis. In their Memorandum dated June 18, 2004 entitled "Mirant Potomac River Power Plant Recommended Legal Actions Worthy of Further Review," lawyers at Schnader, Harrison Segal & Lewis LLP specifically warned that:

In the event the Mayor and Council determine to pursue one or more of these actions [to support cessation of the plant] additional research is necessary to identify more fully the legal implications and viability of each action.

The City Attorney, in his June 18, 2004 Memorandum to Council, similarly stated that the "information necessary to form a decision as to the expediency" of certain abatement proposals "is currently lacking." Nevertheless, a text amendment was immediately initiated without further research and, apparently, relying on the incomplete legal analysis of counsel.

By proposing to change the classification of the site from a noncomplying use to a nonconforming use, the City has effectively begun a piecemeal downzoning without meeting any of the tests for such an action. A change in circumstances or an error in the original zoning of the property has not been demonstrated, as is required under the test enunciated by the Supreme

Page 4 of 5 November 12, 2004

Court in <u>Turner v. Board of Supervisors of Prince William County</u>, 263 Va. 283, 559 S.E.2d 683 (2002).

This process appears also to ignore the provisions of the Zoning Ordinance. The Mirant plant is a noncomplying use. Under the noncomplying use ordinance (not the nonconforming use ordinance), noncomplying uses may continue indefinitely and are considered legal uses. Sec. 12-302. The Ordinance provides that "no use shall be deemed a nonconforming use if its lack of compliance is occasioned solely by the zoning regulations adopted on June 24, 1992." Sec 12-301; see also 12-201(c). The attempt to change this single noncomplying use into a nonconforming use is contrary to the Ordinance, as Mirant's noncompliance meets this definition.

This is an area that is heavily regulated by the Commonwealth and by the United States. The proposed Text Amendment would seek to place the day-to-day operations of this plant under the Special Use Permit provisions of Alexandria's Zoning Ordinance, exposing the plant to inconsistent and unworkable performance standards, a result that cannot be in the best interests of Alexandria, even if the City had the authority under Federal or Commonwealth law to act in this area.

It cannot be argued <u>both</u> that the use of the plant should be deemed incompatible <u>and</u> that the City should control the operations through the SUP process. That position is internally inconsistent.

This flawed analysis is further undermined by the absence of a supported factual record. While acknowledging the important regional public purpose of the plant, there has been no serious investigation into the impact of the proposed Text Amendment.

As we are all aware, a Consent Decree was recently agreed to by and between Mirant, the U.S. Department of Justice, the U.S. Environmental Protection Agency, the Commonwealth of Virginia, and the State of Maryland. The Consent Decree has been approved by the United States District Court in Alexandria and is awaiting approval by the U.S. Bankruptcy Court. The Consent Decree provides for significant reductions in regional impacts from the operation of Mirant's plants in Alexandria and throughout the region. The Consent Decree further provides for additional studies as well as environmental projects that directly impact the Potomac River plant and will improve its operations. Moreover, the DEQ and Mirant entered into an Order by Consent under which Mirant is obligated to fund a downwash study (another citizen concern). The model protocol for the study is subject to approval by DEQ and the results will be shared with DEQ. Mirant is bound by this consent order to address any issues found.

Outdated and incomplete information and unproven allegations, inconsistent with the Consent Decree are being used in support of the proposed Text Amendment. Rather than letting the Consent Decree operate as intended and tracking the impacts as it is implemented, the proposed Text Amendment ignores the Decree. The public's legitimate interests are harmed, not

Page 5 of 5 November 12, 2004

helped, when the City works at cross-purposes with the Commonwealth and the Federal government.

<u>Conclusion.</u> The Mirant plant is and has been a good neighbor in the City of Alexandria. It provides a public service and tries to do so in a way that furthers everyone's mutual interests. The recently-approved Consent Decree represents a significant investment by Mirant in the continually improving operations of this plant.

The City's proposed actions may be well-intentioned but they are grounded in faulty reasoning and incomplete facts. Revocations and threats of closures are ultimately hollow tools for enforcement if they do not account for the economic, environmental, and energy realities of this plant and this region.

Moreover, if the City starts down the road of seeking to control the operations of this plant through zoning and regulatory devices which do not properly apply, it virtually invites expensive and troubling litigation. With hundreds of millions of dollars involved in this site, many other goals of the City are jeopardized.

The proper and wise way to handle the City's legitimate concerns is not by turning the zoning process on its ear. Instead, the wise course is to allow the Consent Decree to operate and monitor the results. That is the best way of responding to the residents' concerns for maximizing air quality while meeting the region's electricity needs with reliable service.

Mirant Potomac River

City of Alexandria
Mayor and City Council Hearing
November 13, 2004



Mirant Potomac River Station



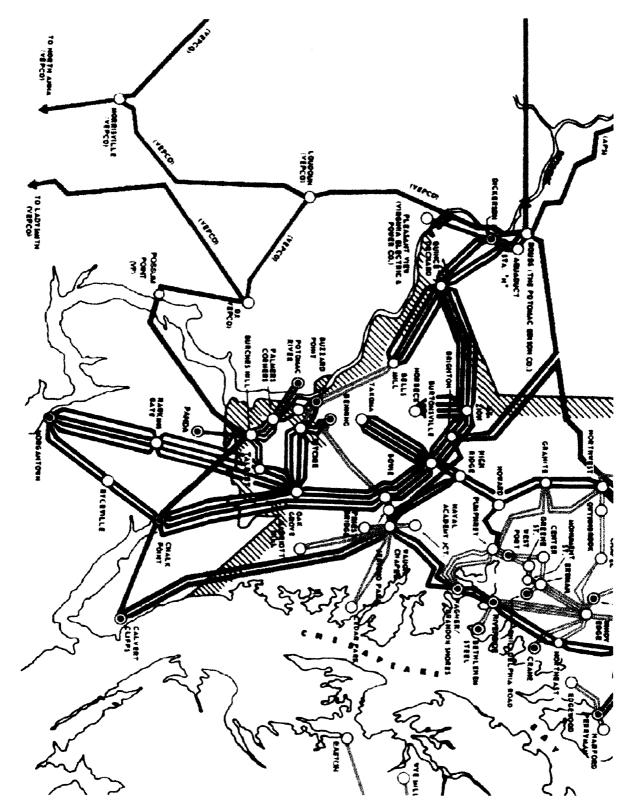
- Mirant is an important public service provider for the region
- Air quality is a regional issue, and Potomac River has only a small impact on the region's and Alexandria's air quality
- Mirant's regional agreement benefits Alexandria many times more than any single solution for Potomac River
- Potomac River has improved performance while providing the same public service to customers

Milant San Toolant Public Service Provider for the Region



- the reliability of the region's power supply because: The regional power operator requires that Mirant provide electricity to the regional grid - Potomac River is necessary for
- Reliability --- The plant is a vital and reliable component of the regional electric system. 97% availability in summer 2004
- National security --- It is important to the nation that Potomac River's supply remain online
- Transmission stability --- Without the plant, the health of the transmission grid that it supplies could be jeopardized
- Although Potomac River is 10% of Mirant's regional generation demands --- without it, the Nation's Capital could risk a blackout it is a necessary component of meeting the region's power

Potomac River's Place on the Grid

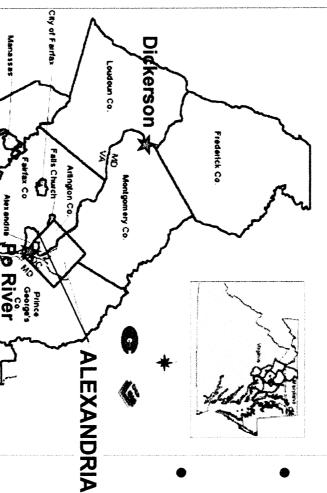




Air Quality is a Regional Issue, and Potomac River Has P Q Q Only a Small impact on the Region's and Alexandria's





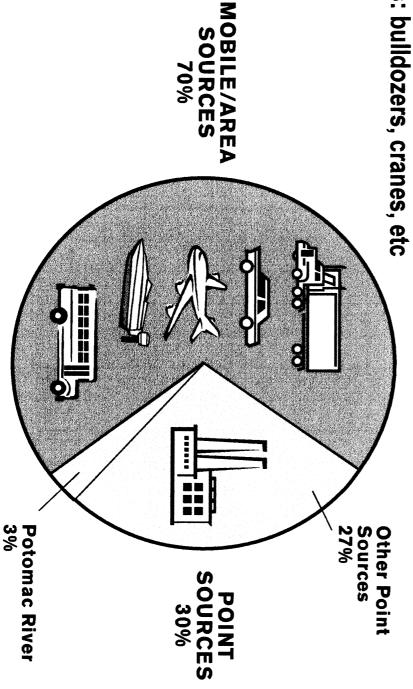


- Ten county region surrounding DC is viewed as a common air shed
- According to Dr. Levy's study, Potomac river contributes between 1-4% of Alexandria's local PM2.5
- Potomac River's contribution to regional NOx levels is approximately 2-3% of total emissions

Regional Emissions Sources



- 70% of NOx emissions come from mobile sources:
- Cars & SUVs
- Trucks & Buses
- Airplanes & Boats
- Off-road sources: bulldozers, cranes, etc



More Than Any Single Solution for Potomac River Mirant's Regional Agreement Benefits Alexandria

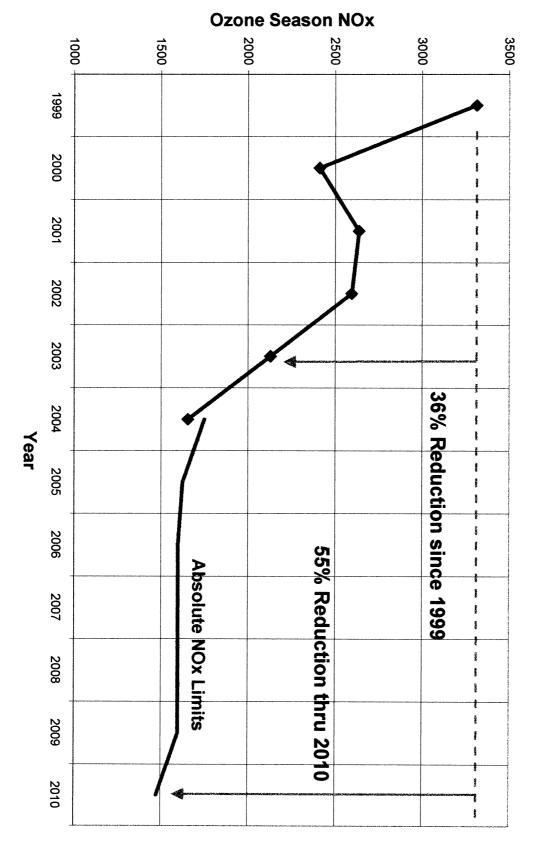


- Under the draft permit discussed this spring, NOx reductions at Potomac River this summer would have been substantial.
- than the draft permit would have required Under our recent agreement with DEQ, MDE and EPA, Mirant will reduce 8 <u>times more NOx in the summer --- and 30 times more on an annual basis, </u>
- Mirant surrendered it's ability to trade for emissions by accepting new, absolute emissions limits at Potomac River and it's regional fleet.
- Additionally, Mirant will complete seven projects supported by Alexandria to help prevent local coal dust and fly ash emissions at Potomac River.
- Projects to be completed by 2006
- Every dust source identified by an independent third-party consultant will be
- Department by EPA, DEQ and the city's own Transportation and Environmental Services The agreement significantly benefits air quality in Alexandria, as determined
- Reductions of NOx are federally enforceable under the agreement, and will be monitored by the city

SEMEN NO ROLL OF SEMENTS



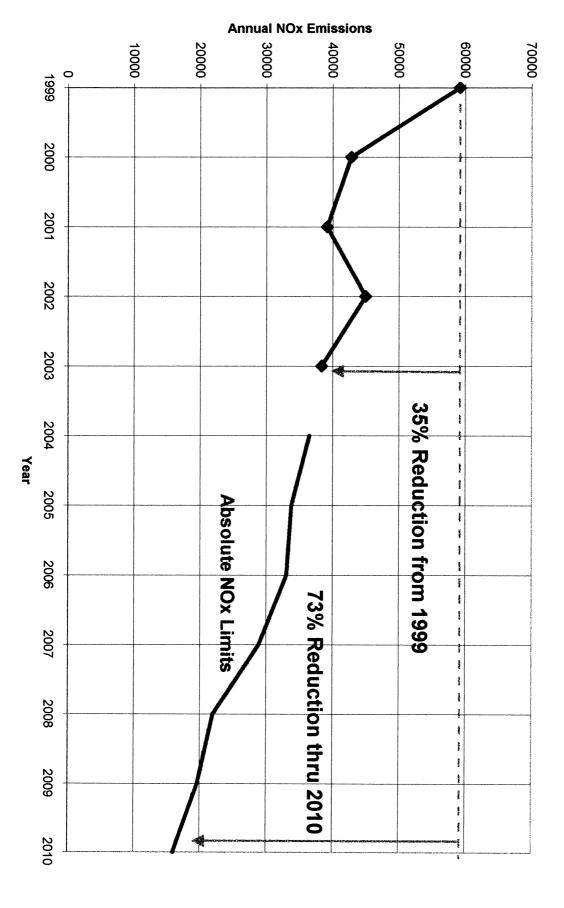
Potomac River Summer NOx Emissions





Anna System Nox Reductions

Mid-Atlantic System Annual NOx Emissions





Potomac River Has improved Performance While Providing the Same Public Service to Customers

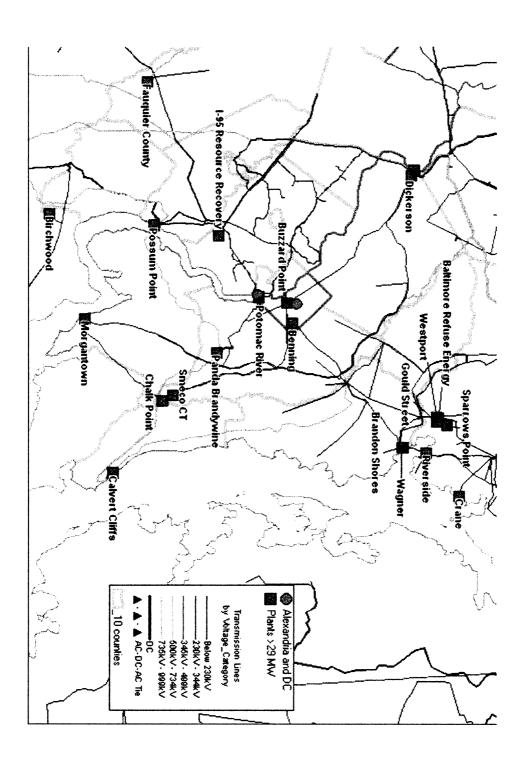


- Potomac River continues to provide public service to the region
- Potomac River continues to meet the requirements of the local grid operator, which continues to call on the plant's output to meet demand and prevent blackouts
- will continue to decrease Potomac River continues to improve environmentally --- NOx emissions have decreased and
- Since 1999, NOx emissions have decreased by 36%
- By 2010, we will decrease NOx emissions by a total of 55%
- Mirant has committed to significant capital investments to achieve these reductions --- Low NOx Burners on by end of 2004, SOFAs on by Summer 2005
- Dust emissions have also been reduced due to:
- Truck washing and dust suppressants
- dust by 2006 Commitment to seven projects through the consent order that continue to prevent and reduce
- Mirant has continued to improve the neighborhood
- \$300,000 in landscaping improvements in 2001
- \$50,000 contributed towards improved railroad crossings
- Mirant is a responsive and responsible neighbor to Alexandria's residents
- \$6 million in spending with local Alexandria businesses over past 3 years
- \$2 million annual real estate taxes
- 123 employees at Potomac River



plant's role in electric grid reliability prior to adopting recent settlement and consent order, as well as consider the The City Council would be wise to assess the benefits of the measures which were contemplated in their absence

Potomac River's Place on the Grid





17 11-13-04 submitted by. Elizabeth Chimento

City Council Meeting (11/13/04)

Re: Text Amendment Change for the Potomac River Generating Station from Non-complying to Non-conforming

Honorable Mayor and Counsel Members:

After four years of investigating problems with the Mirant plant, focusing on scientific studies, modeling and laboratory testing, it is evident that adverse health effects on both the adjacent neighborhoods and the city from this plant (listed below) are serious, necessitating the zoning text amendment requested today.

- 1. Small soot particles (2.5 microns and less) emitted from this and other old coal-fired power plants are associated with increases in asthma, upper respiratory illnesses, lung cancer, heart disease and strokes.
- 2. The Potomac River Power Plant "is likely the single largest contributor to PM2.5 in Alexandria." (Dr. Jonathan Levy, Harvard School of Public Health)
- 3. Chronic exposure to particulate matter shortens life expectancy from one to three years. (Dr. C. Arden Pope III, Brigham Young University)
- 4. The EPA, recognizing the harmful health effects from exposure to 2.5 particles, currently recommends the acceptable limit be lowered from 15 ug/m³ to as low as 12 ug/m³, which would result in Alexandria's exceeding the National Ambient Air Quality Standard (NAAQS).
- 5. A preliminary study on downwash, conducted by Sullivan Environmental Associates (3/04), indicates that downwash is occurring on the upper floors of Marina Towers as often as 1200 hours per year. This means that the NAAQS are probably being exceeded at that site. Other tall buildings south of the plant, including Port Royal and Alexandria House, must be tested as well to determine if downwash is occurring at those locations.
- 6. The City of Alexandria officially opposes both the Federal NOX Consent Decree and the Virginia State Operating Permit as deficient and insufficient in protecting the health of Alexandrians (City Responses dated 10/28/04 and 11/8/04).
- 7. The City's response to the Federal Consent Decree also states that (US EPA-approved) modeling for criteria pollutants (SOX, NOX, PM 10) at this plant are projected to exceed up to 60 times the allowable standard. (City of Alexandria Comments on the Consent Decree, 11/8/04, Page 3).
- 8. Mirant's downwash protocol, ordered by the VADEQ, exhibits "serious deficiencies" and is "evidence of the unreliability of this process." The protocol omits Marina Towers as a downwash site (already established by the Sullivan

Preliminary Downwash Study) as well as other high buildings south of the plant (City of Alexandria Comments on the Federal NOX Consent Decree, 11/8/04, Pages 1, 8)

Due to these serious problems occurring at the Mirant plant, I urge you to effect the zoning change proposed so that the City may exercise more initiatives to protect the health of Alexandrians.

Respectfully, Elizabeth Chimento 1200 North Pitt Street Alexandria, VA 22314

Pepco Holdings, Inc.

701 Ninth Street, NW Washington, DC 20068

202 872-3227

William M. Gausman Vice President - PHI Power Delivery Asset Management

November 12, 2004

VIA HAND DELIVERY

Mayor and Members of the City Council City Hall 301 King Street, Room 2100 Alexandria, Virginia 22314

RE: Text Amendment #2004-0008 Amendment to Noncomplying Use Regulations Applicable to Coal Fired Power Plants

Dear Mayor and Members of the City Council:

I am writing on behalf of Potomac Electric Power Company (Pepco) to relate the role that the Potomac River Generating plant plays in ensuring the reliable electric supply to the Washington metropolitan area. The electric supply to the District of Columbia and surrounding area has been developed over many years and cannot be changed overnight. This system is a combination of generation and transmission and if a change is made in either of these components then additional generation or transmission must be constructed before any individual component is retired or terminated.

The Potomac River electric system supplies load across North West and South East portions of the District of Columbia including Georgetown, the Central Business District, various government facilities and the Blue Plains Wastewater Facility. The generation is required to support the 230,000 volt transmission lines that also supply the substation at this location. This combination of generation and transmission is needed to reliably supply the District of Columbia. Neither the total generation at Potomac River station nor a single transmission circuit by itself is capable of serving the entire peak load attached to Potomac River substation. In other words if one of the 230KV transmission circuits is lost, the remaining 230KV circuit and at least one Potomac River generator are necessary to serve the total peak load attached to Potomac River substation. During high load periods in the summer if one 230KV line is lost for any reason then the requirement for Potomac River plant is to generate sufficient electricity to match the existing load being supplied by the substation. This will normally require the

operation of all of the generation capacity at the Potomac River until the 230KV line is returned to service.

The operation of the transmission system is the responsibility of the PJM transmission organization. It is their responsibility to set the criteria that is used to determine how the transmission lines will be operated and when generation is required. Both Pepco and Mirant are required to comply with these operating criteria to ensure sufficient generating capacity and reliable electric service. I recognize that this facility primarily supplies the District of Columbia however the transmission system within the entire mid- Atlantic region is a series of interconnected lines that depend on the each other to ensure a safe and reliable supply of electric power.

In summary the continued operation of the generating facilities at Potomac River are required for the safe and reliable delivery of electric power to the District of Columbia. Any change in zoning that would jeopardize our ability to perform that critical function is not in the public's best interest and should not be approved.

Thank you for consideration of this important matter.

Sincerely,

William M. Gausman

17 13-04

November 9, 2004

Mayor William D. Euille City of Alexandria City Hall – Room 2300 301 King Street Alexandria, VA 22314

Re: Text Amendment #2004-0008 Amendment to Noncomplying Use Regulation Applicable to Coal Fired Power Plants
Special Use Permit #2004-0089 Mirant Potomac River Generating Station
Special Use Permit #2004-0090 Mirant Potomac River Generating Station

Dear Mr. Mayor,

My name is Debbie Knight and I am the Environmental Analyst for the Potomac River Generating Station. My role is to ensure that the plant is compliance with all applicable environmental laws, regulations and ordinances. I have worked here for six years but have been with the company for sixteen years. It is extremely distressing to think that after all these years; the City of Alexandria would try to close down this power plant. If that happens, I would be forced to look for another job and with the job market like it is I am sure that I would have to apply for unemployment benefits. As a single mother, this affects not only myself but my family as well. I am sure you are aware that the plant employs 117 people not including contractors.

The plant has been in operation since 1949. We have made great strides to improve our environmental performance and continue to look for ways to improve. All of the employees at the Potomac River Generating Station are extremely vigilant when it comes to running the plant. We take our environmental performance very scriously and take a lot of pride in what we do.

I am very active in the Alexandria community and belong to the Alexandria Local Emergency Planning Committee (LEPC), the Alexandria Education Partnership and the Chamber of Commerce. Mirant sponsors and I participate in the annual Alexandria Earth Day event and the Alexandria Waterfront Festival every year. Potomac River also has an annual Open House and invites neighbors within a quarter mile radius of the plant to educate them on plant operations and to give them an open forum to discuss and resolve issues of concem I also organize and conduct tours from grade school students up through college students and even given tours to visitors from other countries. We were even part of a training program for students from NIMA (National Imaging and Mapping Agency). Our tours not only explain how electricity is made but focus on environmental excellence.

In closing, I would like to ask you to please consider how the decisions made by yourself and your council affect the lives of the employees that work at the power plant. We feel that we provide a vital and necessary service to the public.

Thank you for your consideration of my comments.

Regards,

Debra L. Knight

Plant Environmental Analyst

Mirant Potomac River, L.L.C.

November 10, 2004

Mayor William D. Euille City of Alexandria City Hall - Room 2300 301 King Street Alexandria, VA 22314

In reply to: Text Amendment #2004-0008 Amendment to Noncomplying use Regulations
Applicable to Coal Fired Power plants
Special Use Permit #2004-0089 - Mirant Potomac River, LLC
Special Use Permit #2004-0090 - Mirant Potomac River, LLC

Dear Mayor William D. Euille,

I am an employee of Mirant Mid-Atlantic and have worked at the Potomac River Generation Station for 6 years. As this is my only income, it hard to imagine myself being unemployed because of the City of Alexandria's attempts to close down my place of business.

As an Administrative Assistant in the plant, I do not any breathing problems, nor have my relatives that have visited the plant for our company picnics. My coworkers and I take great pride in working here and have taken great steps to minimize our impact on our neighbors while we keep the lights on for our customers. I am responsible for all the plant functions, business meetings/luncheons and catering events. I always use the business in the City of Alexandria for all my catering need spending thousands of dollars, which helps to promote the City of Alexandria and it's businesses.

Electricity is an important and essential product. Please consider the attempts to close the Potomac River Station. Do not change the zoning text or revoke the plant's special use permits. I look forward to working in the City of Alexandria for many more years to come.

Yours truly.

Gwendolyn E. Cooks Administrative Assistant

Mirant Potomac River, LLC

In regard to:

TEXT AMENDMENT #2004-0008 AMENDMENT TO NONCOMPLYING USE REGULATION APPLICABLE TO COAL FIRED POWER PLANTS SPECIAL USE PERMIT #2004-0089
MIRANT POTOMAC RIVER GENERATING STATION SPECIAL USE PERMIT #2004-0090
MIRANT POTOMAC RIVER GENERATING

November 12, 2004

Mayor William D. Euille City of Alexandria City Hall – Room 2300 301 King Street Alexandria, VA 22314

Dear Mayor Euille,

My name is Gordon L. Smith and I have worked at the Mirant Potomac River Plant for twenty years. I have a bachelor's degree in mechanical engineering and a master's degree in energy systems. My education background focused on energy studies and my perspective on closing the plant may differ from most of my colleagues, but I thing it provides the best reasoning not to close the plant.

Though the plant closure would have an immediate effect on my finances, I think a global perspective is required to correctly access the closure of the plant. I am 51 years old. When I was born the U.S. did not import any foreign oil and there was no U.S. military presence in the mid east. The U.S. now imports 60 percent of its oil and maintains a large battle group in the mid east area at all times. The growing emergence of Asia is the main factor contributing to the shortage. The cost of oil continues to rise and most experts now predict the supply of oil will no longer be able to keep up with demand. Aggravating the problem is the source of the imported oil, which is in very unstable areas of the world. The cleanest fuel to burn is gas, but the U.S. supply of gas has not been able to keep up with demand. The Mirant Chalk Point plant converted to gas, but is prohibited from using it in the winter because there is not an adequate supply for generating and home heating. Many energy companies are now trying to create unloading facilities to import liquefied natural gas. However, the source of the gas is the same source as the oil and shares the same problems.

The source of power for generating facilities can be oil, gas, coal or uranium. The only U.S. fuel available in abundance is coal. It provides energy independence for the US and jobs for the US. Even nuclear has its limitations. The known world supply of enrichable uranium for nuclear fission would be used up in a matter of years if nuclear replaced all the fossil plants in the U.S.

I am not advocating that coal fired plants operate without strict emission. Every effort should be made to limit pollution and the Potomac River Plant continues to improve its emissions. The market recognizes that coal will be a dominate fuel in the

future and a lot of coal clean air techniques are being developed that the plant is investigated in addition to the implementation of current technologies.

The U.S. will face tremendous energy challenges this century. The price of oil is expected to double by 2010. The price of gas has already doubled in the last two years. Real solutions to energy need to be prudently pursued with the support of the local, state and federal government. Alexandria should encourage the development of clean burn technologies using coal, but closing any coal-fired plant ignores the best interests of the country and the reality the U.S. faces securing the fuels required for generation.

Yours truly,

John Land

TEXT AMENDMENT #2004-0008 AMENDMENT TO NONCOMPLYING USE REGULATION APPLICABLE TO COAL FIRED POWER PLANTS SPECIAL USE PERMIT #2004-0089 MIRANT POTOMAC RIVER GENERATING STATION SPECIAL USE PERMIT #2004-0090 MIRANT POTOMAC RIVER GENERATING

November 12, 2004

Mayor William D. Euille City of Alexandria City Hall – Room 2300 301 King Street Alexandria, Virginia 22314 alexvamayor@aol.com

Dear Mayor Euille;

I am writing in response to the recent coverage concerning the shutting down of our plant. I am grieved in particular about the comments being made that this plant is a health concern to some of the residents in this city. I am a 48-year-old native Alexandrian and resided in this city until 10 years ago. My husband and I have raised two healthy daughters who have suffered no ill effects from this environment, and neither have we.

My husband and I are bargaining-unit employees with 46 years of service, between the two of us, with this company. (Mirant, formally Pepco) We are both proud to be connected to a company that not only cares about existing in this city, but one that takes pride in being a good neighbor.

We work with people who consistently give of their time and money to support, businesses, fundraisers, and programs that benefit the schools, in this community.

The recent agreement with the federal and state government agencies will make our plant even cleaner than it already is.

In closing, I encourage you not to make any hasty decisions. Closing this plant would severely impact my family financially. Both my husband and I would be unemployed.

Respectfully Sulmitted,

Victoria R. Gross

TEXT AMENDMENT #2004-0008 AMENDMENT TO NON COMPLYING USE REGULATION APPLICABLE TO COAL FIRED POWER PLANTS

SPECIAL USE PERMIT #2004-0089

MIRANT POTOMAC RIVER GENERATING STATION

SPECIAL USE PERMIT #2004-0090

MIRANT POTOMAC RIVER GENERATING

Dear Mayor William D. Euille

My name is Karen M. Bouldin. I have been employed with the Company for 18 years, and worked at this location for 2 ½ years. I am a Bargaining Unit Employee.

My concern in shutting down this plant is that so many people will be out of work. What will we do? We all have families to support, and other responsibilities. I have two children in college. My daughter is a junior and my son is a freshman. If I am unemployed my children will not be able to attend college. I will not be able to feed my family, pay my mortgage and other bills. Do you want us to be homeless people?

Today, Mirant is more conscious of environmental issues. This plant is cleaner than it's every been. We are constantly thinking and working towards keeping the environment clean by Nox reductions, dust and fly ash controls.

Please reconsider any decision to close this Plant. So many lives will be affected. We are working hard to make the environment clean and safe for the employees, residents and the community. Our aim is to make the community a much better place to live.

an M. Boulden

Thank you,

Karen M. Bouldin

In regard to:

TEXT AMENDMENT #2004-0008 AMENDMENT TO NONCOMPLING USE REGULATION APPLICABLE TO COAL FIRED POWER PLANTS SPECIAL USE PERMIT #2004-0089
MIRANT POTOMAC RIVER GENERATING STATION SPECIAL USE PERMIT #2004-0090
MIRANT POTOMAC RIVER GENERTING

Dear Mayor Euille,

I am an employee of Mirant Mid-Atlantic and have worked t the Potomac River Generating Station going on 27 years. I was a member of the International Brotherhood of Electrical Workers, Local 1900 for 8 years prior to going into management. I have lived in Alexandria for a few years and I am very concerned with the City of Alexandria's attempts to close down this power plant. I have worked at this plant all these years and the thought of having to start looking for a new job at this time of my career really frightens me.

At the plant I work in the plant operations, which includes overseeing the activities in generating the electricity that is supplied to grid. I can assure you that my daily activities ensure that I do everything to make sure that the plant runs in a safe and efficient manner and complying with environmental regulations. We take great pride in being able to operate a plant in the heart of the city and being a good neighbor to the residents of the city.

The plant produces an important and essential product. It requires a 24 hour operation to generate electricity that everyone is dependant upon and often taken for granted. The employees of the plant are supportive and frequent the restaurants on a daily basis. We utilize the services of many local businesses in the daily activities of plant operations. We are supporters of local charities and public schools. Because of our location and open door practices, we give many tours each year informing our youth in the process to generate electricity and the environmental conscious efforts that we constantly monitor. I have personally brought Boy Scouts and Cub Scouts on tours and worked on merit badges associated with our business. Please reconsider the attempts to close the Potomac River Station. Do not change the text to revoke the plant's Special Use Permits. I look forward to working in the City of Alexandria for many years to come.

Yours Truly,

Roy W. Raasch

Operations Team Leader

Potomac River Generating Station

Alexandria, Va

Text Amendment #2004-0008 AMENDMENT TO NONCOMPLYING USE REGULATION APPLICABLE TO FIRE POWER PLANTS SPECIAL USE PERMIT #2004-0089
MIRANT POTOMAC RIVER GENERATING STATION SPECIAL USE PERMIT #2004-0090
\[
\text{MIRANT POTOMAC RIVER GENERATING STATION}
\]
City Hall – Room 2300
301 King Street
Alexandria, VA 22314

Dear Mayor Euille,

I am an employee of Mid-Atlantic and have worked at the Potomac River Generating Station for 1 year. I am the Technical Trainer for the plant. I am very concerned by the City of Alexandria's attempt to close down this station. My job will be in the balance of that decision. My family and I depend on the income I earn from my job. For the short time that I worked in the plant, there has been great focus on lowering opacity and Nox emissions and being a good neighbor of Alexandria.

I feel that I help produce a very important and essential product. Potomac River Generating Station and employees are taken for granted in this matter. Please reconsider the attempts to close the station. Do not change the zoning text or revoke the permit.

Thank you for your consideration of my comments.

Yoµr truly,

November 10, 2004

In regard to:

TEXT AMENDMENT #2004-0008 AMENDMENT TO NON-COMPLYING USE REGULATION APPLICABLE TO COAL FIRED POWER PLANTS

SPECIAL USE PERMIT #2004-0089

MIRANT POTOMAC RIVER GENERATING STATION

SPECIAL USE PERMIT #2004-0090

MIRANT POTOMAC RIVER GENERATING

Dear Mayor Euille,

I have worked for Mirant, formerly Pepco, for approximately 25 years. The last 5 years were at the Potomac River Station in Alexandria, Virginia, as the Business Manager. I am very concerned with the City's attempts to close this generating station by changing the zoning status to "Non-Conforming". I contribute to half of my family's income and this closure would seriously impact my family's economic status because I currently have 2 children in college and the responsibility for 2 nephews and 1 niece.

For my entire professional life I was always very proud to state I worked at an electrical generating station where we produced a product that all Americans depend on for a certain quality of life. I know, as an insider, that we operate in an environmentally-conscious atmosphere, and are continually making strides to improve our operations. I take great pride in showing off our plant. When corporate personnel visit, and they want a tour, I take them to the roof to show off our clean stacks and all of the beautiful national treasures. Also when I'm out and about shopping in Alexandria, especially this time of year, I am more and more reluctant to tell people where I work because of the bad "press" we receive constantly.

As I mentioned previously, I've worked in coal-fired generating stations for 25 years while raising a family of 4 children. 3 of my 4 children were carried to full term while I worked at the plants, with no ill side effects. I am proud to say all of my children are healthy, productive young adults, and 2 of them live in Virginia within a few miles of our plant. The oldest is now 26 and the youngest is 18.

I feel we do a really great job in "doing all the right things" to make us community-minded and an environment-friendly neighbor. I hope you will reconsider the City's attempts to close Potomac River and, revoke the Special Use Permits. I look forward to working, shopping, and dining in beautiful Old Town for many years to come.

Sincerely,

Patricia Mattingly

TEXT AMENDMENT #2004-0008 AMENDMENT TO NONCOMPLYING USE REGULATION APPLICABLE TO COAL FIRED POWER PLANTS SPECIAL USE PERMIT #2004-0089 MIRANT POTOMAC RIVER GENERATING STATION SPECIAL USE PERMIT #2004-0090 MIRANT POTOMAC RIVER GENERATING

November 10, 2004

Mayor William D. Euille,

I am appaled at the decision of the Planning commission's recommendation to change the status of the Potomac river generating plant from noncomplying to non conforming. I hope you will take all facts into consideration before taking any action.

I work at the Mirant Potomac River Generating station. I have been working for the with this company and its predecessor PEPCO since 1987. I am employed in the capacity of Team Leader Chemistry. In this capacity, I am responsible for the water and waste water resources at the plant. I take pride in the work I do, and hold myself to the highest standards. I consider myself an environmental steward and can state with absolute confidence that with the improvements made to the water and waste water system there has been zero NPDES permit violations in the last 5 years.

Over the years that I have been working here, I have been a first hand witness to the overall improvement in the operation of the plant. This is validated in the memorandum –attachment 1 BREDL information sheet, Potomac River Generating station- by the city attorney Mr.Pessoa on June 18, 2004.

I am the major bread winner in my family and the act of closing the plant would have serious impact on my family.

Thanking you,

Sincerely,

Narayanan Iyer

Narayanan.iyer@mirant.com

In regard to: TEXT AMENDMENT #2004-008 AMENDMENT TO NONCOMPLYING USE REGULATION APPLICABLE TO COAL FIRED POWER PLANTS

SPECIAL USE PERMIT #2004-0089 MIRANT POTOMAC RIVER GENERATING STATION

SPECIAL USE PERMIT #2004-0090 MIRANT POTOMAC RIVER GENERATING

Mayor Euille,

I am a concerned taxpayer and employee of Mirant Mid-Atlantic, I have been employed at the Potomac River Generating Station for 28 years. I have also been an active member of the International Brotherhood of Electrical Workers, Local 1900 for as many years. The news of the City of Alexandria's attempt to close down this power plant is most unsettling to my family and me.

My current job title is Control Room Operator. I have worked my way through the labor grades to this position by receiving classroom and on the job training. It has always been company policy that an employee be trained and qualified for each position held on the team. Part of my job responsibility is to maintain the integrity of the EPA and DEQ standards dictated by the Federal Government. I take the task of keeping the air and water clean very seriously. I am also raising a family in this environment. This has been a job I am proud of; I enjoy "lighting the city."

I know that we also have a responsibility to the City of Alexandria to do our best. When our customers turn on their lights after a long day at work they won't think of me because the service I provide is there and available when they need it. Changing the zoning text or revoking the Special Use permits would jeopardize a luxury we take for granted. Potomac River Station has been a vital part in the growth of Alexandria, wanting the city only to prosper. The company, my company, takes the well being of Alexandrians seriously and will continue to keep it a good working partnership. It is my hope to continue working in the City of Alexandria.

Sincerely, Edward B. Curfable

17 11-13-04



Norfolk Southern Corporation 1500 K Street, N.W., Suite 375 Washington, D.C. 20005 202 383 4432 202 383 4018 FAX C. Scott Muir Resident Vice President Public Affairs

Re: Text amendment #2004-0008 Amendment to non-complying use regulation applicable to coal fired power plants

Mayor William D. Euille City of Alexandria City Hall - Room 2300 301 King Street Alexandria, VA 22314

November 12, 2004

Dear Mayor Euille:

This refers to the City Council's consideration of zoning proposals related to the continued operation of the Potomac River electric power generation plant.

Mirant Mid-Atlantic is an important customer of Norfolk Southern. Mirant receives coal shipments to the Potomac River power plant through our company's train service. These train shipments represent good jobs for Virginia residents. Norfolk Southern has worked successfully with City officials and community members to minimize transportation impacts to the quality of life of local residents.

Norfolk Southern also considers Mirant's Potomac River power plant an essential part of the region's energy supply. We are concerned that actions being considered by the City Council will prematurely end the productive life of the power plant. It is not known how the reduction in power supply will affect the region's energy supply. We understand the Mirant Potomac River plant is cleaner than in years past, and a recent agreement with the Federal and State government agencies will further reduce oxides of nitrogen, dust and "flyash".

We urge the City Council not to rush a decision on Mirant's continued operation in light of the economic impact and availability of affordable, reliable electric energy in the region.

Thank you for your consideration.

Respectfully,

Cc: Governor Mark Warner

Representative Jim Moran Senator Patricia Ticer

fort Main

Senator Richard Saslaw

Statement of Michael E. Hobbs on behalf of the Old Town Civic Association City Council November 13, 2004

Text Amendment #2004-0008
(Nonconforming Coal Fired Power Plants)

Thank you, Mayor Euille, Vice Mayor Pepper, and Members of Council. I am Michael Hobbs, speaking on behalf of the Old Town Civic Association.

We support the recommendation of the Planning Commission and the City Attorney that you adopt this amendment to the zoning ordinance to categorize coal-fired electrical power generating plants as nonconforming uses, subject to abatement

We commend Mirant for the positive steps it has agreed to take under the consent decree now pending in the federal courts. We are aware, too, of the planned "soiling study" which will attempt to determine whether coal dust from the plant is the source of the residue reported by residents in Old Town. Those are important and laudable steps toward identifying and removing potential threats to the health of Alexandrians. But they do not by themselves address, let alone remove, what may be the most serious threat to our health, which is the emission of Primary Particulate Matter $(PM_{2.5})$ from the plant's five stacks.

The "downwash study" to be conducted under a protocol specified by the Virginia DEQ may give us more answers. But we already have more than ample evidence that emissions from this plant have constituted what the City Attorney calls "a persistent pattern of noncompliance" with the federal Clean Air and Clean Water Acts; and we have Dr. Jonathan Levy's conclusion that the Mirant Power Plant "is likely the single largest contributor to PM_{2.5} in Alexandria," with higher concentrations occurring closer to the plant.

It is conceivable that the actions taken in response to the consent decree, and the results of these contemplated studies, will lead City Council ultimately to conclude that any threat to the public health and safety in Alexandria has been removed. Given what we know now, however, that seems highly improbable—and whatever the probability is, the Council should not gamble the public health against a speculative future outcome. The City needs to have every possible legal and regulatory tool at its command now to ensure the outcome that it can protect the public health to the maximum extent possible. Reclassifying the plant to nonconforming use status is an important and perhaps essential means to that end, and should be adopted.

Thank you for your consideration.

17 11-13-04 submitted by Lillian White

The League of Women Voters of Alexandria
Testimony on the text amendment Mirant Plant
November 13, 2004
City Council Public Hearing

Good morning. I'm Lillian J. White, co-president of the League of Women Voters of Alexandria. The League of Women Voters of the U.S. and local Leagues' across the country support measures to control pollutants from mobile and stationary sources since the 1960s. Alexandria's League recently reaffirmed its commitment to its position on Air Quality.

Our research shows that the Potomac River Coal Power Plant located on Alexandria's waterfront is the number one stationary source of air pollution in our city.

We support the adoption of the text amendment revoking the plant's special use permits 2292 and 2297 and the revoking of the noncomplying use status.

We believe, Mirant, the owners have taken advantage of its noncomplying use status. Mirant has not complied with federal and state environmental regulations. Its persistent pattern of noncompliance, 8 out of 8 quarters in a 2 year reporting period violated the Clean Air Act and its designation as a High Priority Violator warrants revoking its special use permits and noncomplying use status.

In addition, the plant was cited for excessive emissions of Nitrogen Oxide, (NOx) a component of ground level ozone by the state, the Department of Environmental Quality last year. The notice was based on Mirant's own monitoring report of 2,139 tons of NOx emissions, 1,120 over the 1,019 state standard. In January, this year, the plant was cited by the Environmental Protection Agency, EPA.

On top of this, the state of Maryland and the United States on behalf of the EPA and the Justice Department filed a joint complaint against Mirant and the Commonwealth for violations at this plant asking for injunctive relief and civil penalties. Virginia's code allowed the Commonwealth to intervene. So, Virginia as we know became the intervenor plaintiff against Mirant.

Mirant denies any violations. But agrees to the Court consent decree.

For Alexandrians' the consent decree is simply not a fair deal. It is not a fair deal that federal and state officials agreed to increase the plant's NOx levels from the state standard of 1,019 to 1,750 tons during the 2004 ozone season to compensate for Mirant's Maryland plants excessive emissions. It's absurd that the parties settled for a benchmark of 2,600 tons, a violation that occurred in 2002, to calculate emissions instead of the Virginia state standard of 1,019 or below. Two thousand six hundred is 1,581 tons above the current Virginia standard. It is not a fair deal that federal and state officials accepted civil penalties for the Potomac River plant's violations which are far less than the Clean Air Act prescribes, \$25,000 a day amounting to about 3 million alone for the year 2003. We should not take the hit for Maryland's poor governing on this issue. The state of Maryland should have and

should be encouraged by DEQ and EPA to issue permits, write statutory regulatory or other enforceable obligations for Mirant's plants across the river to reduce excessive NOx and other toxic emissions. Tell Maryland to take responsibility, not just dump on Alexandria.

It is not a fair deal that particulate matter 2.5, which is the most harmful to children and adult's health is not included in our state operating permit.

On top of this, we all know the plant on Alexandria's waterfront provides power for D.C. and Maryland. Mirant then sells wholesale. In other words, Alexandria gets the pollutants while D.C. and others get the power.

When the Clean Air Act was enacted in the 1970s it was assumed that older coal power plants such as Mirant would close after the 30 year projected life and be replaced by cleaner new plants. Obviously, this did not happen. So, the plant still operates after 50 years and has not been required to install the maximum achievable control technology to combat air pollution or use best practices on the coal pile or transport of coal and flyash through our city.

Mirant has not been a friendly corporate neighbor. Excessive NOx emissions is a very serious matter. Particulate matter, particularly 2.5 is a very serious matter. Toxic metals emissions are a very serious matter. These conditions and the plant's short smokestacks, shorter than most plants because of its nearest to Reagan National Airport, causes the plume to hover over our city and downwash on the nearest residence to the plant.

We support the city's recommendation to complete downwash studies, particularly on particular matter 2.5 and toxic metals before accepting any amendment to the state permit.

We strongly support the city's proposed land use regulation: the adoption of the text amendment revoking the plant's special use permits 2292 and 2297 and the revoking of the noncomplying use status.

We also object to any bankruptcy reorganization plan which includes continued operation of this plant.

This use is not a compatible use for Alexandria's waterfront or nearby residential areas, or Alexandria. As studies have shown, emissions from this 50 year old coal power plant are harmful to our health. It should go away. We will all breath easier.

Thank you for the opportunity to comment on this very serious matter.

Sincerely,
Lillian J. White
co-president League of Women Voters of Alexandria
703.980.0748
119 West Mason Avenue
Alexandria, VA 22301



Craig A. Glazer
Vice President - Governmental Policy 1 - 13 - 04 **PJM Washington Office**

(202) 393-7756 .FAX (202) 393-7741 e-mail: glazec@pjm.com

- submitted by

Mayor William D. Euille City of Alexandria City Hall—Room 2300 **301 King Street** Alexandria, VA 22314

> Re: Text Amendment #2004-0008 (Amendment to Noncomplying Use Regulation **Applicable to Coal Fired Power Plants** Special Use Permit #2004-0089 (Mirant Potomac **River Generating Station**) Special Use Permit #2004-0090 Mirant Potomac **River Generating Station)**

Dear Mayor Euille and Council:

PJM Interconnection, L.L.C. ("PJM") wishes to provide important information to the City Council concerning the interrelationship of the Potomac River Generating Station to the reliability of electric service in the region. PJM is the independent Regional Transmission Organization responsible for maintaining the reliability of electric service in the service territory of Potomac Electric Power Company (PEPCO). As an independent Regional Transmission Organization, our role can be analogized to that of an air traffic controller. We are independent of Mirant, PEPCO or any other entity and have, as our duty, operating the high voltage electric transmission system in order to ensure the provision of safe reliable electric service in this region. We are regulated by the Federal Energy Regulatory Commission.

The electric power grid is an interconnected system. Generating plants are connected to the grid through high voltage transmission lines which transport electricity from generators to customers. Although generating plants can at times be located far from customers, in any local area there needs to be sufficient infrastructure to ensure that generation and load remains balanced in that area. Should it not, the area could experience blackouts.

The Potomac River Generating Station is designated as a "must run" generating unit. A generating station is designated as "must run" if, as a result of the application of electric reliability criteria, PJM determines that the unit is needed to be available to generate electricity in order to maintain the balance of generation and load in the area. This does not mean that the unit must run continuously. However, at least some of the individual generating units must be available to run

during peak summer load conditions, or if certain other contingencies occur in order to ensure that the electric system remains in balance and reliability is maintained.

As a "must run" generating station, any action that would jeopardize the availability of the plant to assist in meeting summer peak load conditions could result in jeopardizing the reliability of electric supply in the greater Washington area as a whole. As a result, there are significant reliability impacts that ought to be of great concern and should be considered thoroughly before particular action is taken which jeopardizes the availability of the plant.

PJM wishes to make clear that the "must run" nature of the plant does not excuse Mirant as the plant's owner from having to meet all relevant environmental laws and permits. Nor should this letter be construed as indicating that there are absolutely no alternatives to the indefinite continued operation of the plant. However, alternative solutions, which would include the construction of new transmission in the area, can be extremely costly and difficult to site given the highly urbanized setting of Alexandria, northern Virginia, and the District of Columbia. For these reasons, and without commenting on the legalities involved, we remain concerned that the proposed amendment could lead to a forced closure of the facility without adequate notice and an opportunity to plan, build and site alternatives. Moreover, the uncertainty as to the future status of the plant over the time period detailed in the proposed amendment could further complicate sound planning for reliability in the area. For these reasons, we request further dialogue with the City of Alexandria prior to its formal consideration of the proposed amendment.

PJM stands ready to work with the Council, the Planning Commission and any independent experts retained by the City to explain these matters in further detail. The limited time afforded at the public hearing makes a full exploration of these complex issues difficult. PJM urges the City to proceed cautiously and stands ready to work with it and all parties so that the full ramifications of any decision on the reliability of electric service in the nation's capital and surrounding area are fully understood.

Please feel free to contact me to discuss this submittal further. I can be reached by cell phone at 202-423-4743 and by e-mail at <u>GLAZEC@PJM.COM</u>

Very truly yours,

Craig Glazer

SPEAKER'S FORM

DOCKET ITEM NO. 17

PLEASE COMPLETE THIS FORM AND GIVE IT TO THE CITY CLERK BEFORE YOU SPEAK ON A DOCKET ITEM.

PLEASE ANNOUNCE THE INFORMATION SPECIFIED BELOW PRIOR TO SPEAKING. 1. NAME: 105 Fortaine X 2. ADDRESS: TELEPHONE NO. 7038365757 E-MAIL ADDRESS: _ 3. WHOM DO YOU REPRESENT, IF OTHER THAN YOURSELF? $_$ irant Mid Atlantic WHAT IS YOUR POSITION ON THE ITEM? FOR: AGAINST: _ OTHER: NATURE OF YOUR INTEREST IN ITEM (PROPERTY OWNER, ATTORNEY, LOBBYIST, CIVIC INTEREST, ETC.): Mirant Mid Atlantic ARE YOU RECEIVING COMPENSATION FOR THIS APPEARANCE BEFORE COUNCIL? This form shall be kept as a part of the permanent record in those instances where financial interest or compensation is indicated by the speaker. A maximum of three minutes will be allowed for your presentation. If you have a prepared statement, please leave a copy with the Clerk. Additional time not to exceed 15 minutes may be obtained with the consent of the majority of the council present; provided notice requesting additional time with reasons stated is filed with the City Clerk in writing before 5:00 p.m. of the day preceding the meeting. The public normally may speak on docket items only at public hearing meetings, and not at regular legislative meetings. Public hearing meetings are usually held on the Saturday following the second Tuesday in each month; regular legislative meetings on the second and fourth Tuesdays in each month. The rule with respect to when a person may speak to a docket item at a legislative meeting can be waived by a majority vote of council members present but such a waiver is not normal practice. When a speaker is recognized, the rules of procedures for speakers at public hearing meetings shall apply. If an item is docketed for public hearing at a regular legislative meeting, the public may speak to that item, and the rules of procedures for speakers at public hearing meetings shall apply. In addition, the public may speak on matters which are not on the docket during the Public Discussion Period at public hearing meetings. The Mayor may grant permission to a person, who is unable to participate in public discussion at a public hearing meeting for medical, religious, family emergency or other similarly substantial reasons, to speak at a regular legislative meeting. When such permission is granted, the rules of procedures for public discussion at public hearing meetings shall apply. **Guidelines for the Public Discussion Period** (a) All speaker request forms for the public discussion period must be submitted by the time the item is called by the City Clerk. (b) No speaker will be allowed more than three minutes. (c) If more speakers are signed up than would be allotted for in 30 minutes, the Mayor will organize speaker requests by subject or position, and allocate appropriate times, trying to ensure that speakers on unrelated subjects will also be allowed to speak during the 30 minute public discussion period. (d) If speakers seeking to address council on the same subject cannot agree on a particular order or

method that they would like the speakers to be called on, the speakers shall be called in the chronological

(e) Any speakers not called during the public discussion period will have the option to speak at the

order of their request forms' submission.

conclusion of the meeting, after all docketed items have been heard.



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P	LEASE ANNOUNCE THE INFORMATION SPECIFIED BELOW PRIOR TO SPEAKING.
1.	
2.	ADDRESS: 1300-1400 N. ROYAL ST.
	TELEPHONE NO. 703 83(05757 E-MAIL ADDRESS:
3.	WHOM DO YOU REPRESENT, IF OTHER THAN YOURSELF?
	Mirant
4.	WHAT IS YOUR POSITION ON THE ITEM? FOR: AGAINST: OTHER:
5.	NATURE OF YOUR INTEREST IN ITEM (PROPERTY OWNER, ATTORNEY, LOBBYIST, CIVIC INTEREST, ETC.):
	Coroup Leader Air Management Svs. Mirant
6.	ARE YOU RECEIVING COMPENSATION FOR THIS APPEARANCE BEFORE COUNCIL? YES NO
Thi	is form shall be kept as a part of the permanent record in those instances where financial interest or npensation is indicated by the speaker.
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TEXT AMENDMENT # 2004 - 0008

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P	LEASE ANNOUNCE THE INFORMATION SPECIFIED BELOW PRIOR TO SPEAKING.
1.	NAME: Harry P. Hart
2.	ADDRESS: 307 N. Washinton &
	TELEPHONE NO. 7038365757 E-MAIL ADDRESS: HELL & WWW ON VOICE TOWN
3.	WHOM DO YOU REPRESENT, IF OTHER THAN YOURSELF? Wirant Johnnac
	Priver Power Plant
4.	WHAT IS YOUR POSITION ON THE ITEM? FOR: AGAINST: X OTHER:
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